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Original Articles

TWO POSSIBLE CAUSES OF EMACIATION NOT GENERALLY RECOGNIZED.*

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Some physicians and many laymen are in the habit of thinking and speaking as if the bulk of the human body could be increased or diminished as simply as we load and unload a vessel: Pour in the cargo and the displacement increases; hoist it out and she rides light on the water. But to feed a patient up or to starve him down is not nearly so simple.

Our state of nutrition depends on the number, the contents and the activities of our body cells; but these cells are not buckets to be filled or emptied at our pleasure. They multiply or atrophy, take up food or reject it, burn fuel or refuse to do so according to their own laws. Without food they can no more do their work than a miner can dig coal or a composer produce sonatas. But no one supposes that you can get good music simply by supplying good food, and it is equally irrational to imagine that good food means good nutrition, independent of the creative and constructive talent of the individual cells. Good food, properly utilized, makes the composers and the cells able to do their work, provided they are otherwise fit for it.

These considerations can be expressed as follows:

SOME FACTORS IN NUTRITION.

A. *Ingestion of Food (in quantity and quality suited to individual needs).*

B. *Utilization of Food (digestion, absorption, metabolism, excretion).*

C. *Cell growth: as influenced by:*

- I. AGE: FILLING OUT IN YOUTH; ATROPHY WITH AGE (ARTERIAL?)
- II. SEXUAL FACTORS (CASTRATION, PARTURITION, MENOPAUSE).
- III. INTERNAL SECRETIONS (ACROMEGALY, PAGET'S DISEASE, MYXEDEMA, GRAVES' DISEASE).
- IV. SLEEP AND OTHER FORMS OF REST (RECREATION, CHANGE, ETC.).
- V. EXERCISE AND OTHER FORMS OF ACTIVITY (WORK).
- VI. HEREDITARY, INDIVIDUAL AND PSYCHIC FACTORS.

The rest of my paper is a discussion of some of these items.

I pass hastily over the factors grouped under A and B. Food requirements exemplify very well that individual factor in hygiene to which I have recently called attention.[1] For example, a corpulent person is not always one who eats more and exercises less than his lean neighbor. *He is one who eats more and exercises less than his individual constitution demands.*

But food in the intestinal canal is still outside the cells. Faults in digestion, absorption, metabolism (e. g., diabetes mellitus) or excretion (nephritis) may render food not merely useless, but actually poisonous to the body cells. Hence, if these activities are themselves out of working order, "good food and plenty of it" may destroy instead of build up the body.

It is, however, to the factors influencing nutrition grouped under C that I wish to direct attention, and my text is this: Cell growth, cell multiplication and cell nutrition are profoundly influenced by age, by sexual influences, by internal secretions, by sleep and exercise, and by a multiplicity of hereditary, individual and psychical factors not yet clearly distinguished.

I. AGE.

In the process of growing up, there is a period when a youth has reached his full height, but has not yet "filled out," as we say. He eats voraciously and seems to "take care of his food" perfectly, but for the thickening up of his body the time has not yet come. A year or two later his cells take on a new type of activity, a new pace, and, without any change in the amount or kind of food taken, his body changes its habit, his nose and jaws grow, and his tailor has to cut his clothes so as to allow for a good deal more beam, though his length over all is the same.

After a time, and without any corresponding change in diet, this furious new production of cells slackens. Growth is complete, or nearly so. The cells again change their type of activity, and now maintain, without notably increasing, their number and their size.

A long period of stability and conservation follows, lasting through the prime of life. Then comes one of the changes in the mode of cell activity, in which I am just now especially interested. I mean the emaciation that develops with increasing age and often without any corresponding change in diet. It is a familiar fact that most elderly persons are thin—thinner than they were in the prime of life. Occasionally this loss of flesh may occur within a relatively short time and may give rise to grave but unfounded apprehension or to a mistake in diagnosis.

On Oct. 1, 1904, I saw, in consultation, a sea captain, aged 49, who had lost 90 pounds of flesh in thirteen months (original weight 265, present weight 175). His health was not bad, his appetite and sleep were excellent, his diet was unchanged, but he and his family physician were not unnaturally alarmed by this loss of weight. To what was it due? I made as thorough an investigation of his organs and functions as I knew how to make and found nothing but a marked beading and lateral motion of the brachial and radial arteries. With some hesitation, therefore, I gave the opinion that he was simply undergoing rather faster than the average the atrophy of old age. The subsequent course of his case has apparently confirmed this opinion. At any

* Read before the San Francisco County Medical Society.

1. "Individual Factors on Hygiene;" Boston Medical and Surgical Journal, June 15, 1905.

rate no known disease has developed since that time. His weight continued gradually to fall until it reached 155 about Jan. 1, 1905; since then it has remained practically stationary and he feels as well as ever. No treatment was given.

But we believe that "a man is as old as his arteries." Is it not likely that this emaciation of old age is connected in some way with arteriosclerosis? Since this idea occurred to me I have been noting the recent variations in weight of arteriosclerosis patients seen in my clinic at the Massachusetts General Hospital. Table 1 shows that 85 per cent. of these cases have lost markedly in weight (13 to 60 pounds) within the period in which it is reasonable to suppose that they acquired the arterial degenerations now existing.

TABLE 1.—EMACIATION IN TWENTY CASES OF ARTERIOSCLEROSIS (NOT SELECTED)

Number.	Hospital Number.	Loss of Weight.	Age.
1	7365	60 pounds in 5 years	65 years.
2	45608	60 " 10 "	70 "
3	32117	53 " 20 "	70 "
4	46330	39 " 2 "	60 "
5	46150	36 " 31 "	57 "
6	45588	35 " 10 "	79 "
7	23868	34.5 " 19 "	69 "
8	36507	32 " 20 "	68 "
9	32773	32 " 48 "	72 "
10	45018	24 " 4 "	56 "
11	42696	23.5 " 3 "	58 "
12	19963	21.5 " 16 "	53 "
13	30572	20.5 " 20 "	52 "
14	45604	20 " 2 "	65 "
15	5127	19.5 " 15 "	65 "
16	45654	15.75 " 7 "	52 "
17	32514	13 " 35 "	62 "
18	46691	9 " 7 weeks	52 "
19	40507	5 " 46 years	66 "
20	26943	Gained weight (3 pounds.)	59 "

Average loss in 19 cases, 29.5 pounds.

It is, I suppose, the usual experience to find most arteriosclerosis patients thin. It is not merely that emaciation makes it easier to feel the degenerated arteries. The fat arteriosclerotic is, I believe, really less common, although I have not yet collected statistics sufficient to prove this. It may very well be that both the emaciation and the arteriosclerosis are due to a common cause and are not related to each other as cause and effect. All that I am concerned to show is that during the years in which arteriosclerosis is prone to develop the individual is apt to lose weight, usually little by little, sometimes with rather alarming rapidity.

II. SEXUAL FACTORS.

I shall merely allude to certain well-known facts which should make us realize better than we often do how powerful are the mysterious energies of sex in their influence on nutrition and how completely subordinate a rôle is played in certain cases by the more simple and obvious factors, like the amount and kind of food. We are all familiar with the marked changes in build and nutrition which are produced when by castration we turn a bull into an ox, but we do not always stop to notice that this change is relatively independent of any variation in diet. In some animals it has been shown that castration makes no difference in metabolism and that any increase in weight which occurs must be referred to the change in the animal's habits. I know of no direct investigation of this matter in human beings.

The increase in flesh so familiar in women after parturition and at the menopause seems in all probability to be guided by sexual influences. I believe that I have noticed in engaged couples a loss of flesh not accounted for by any variation in diet, sleep or exercise. This is, however, a more doubtful point.

III. INTERNAL SECRETIONS.

Myxedema patients certainly gain weight and exophthalmic goiter patients certainly lose weight without any corresponding observable change in diet, digestion, absorption or excretion. The metabolic processes are influenced profoundly. For example, it has been estimated that exophthalmic goiter patients require from 10 per cent. to 20 per cent. more food to maintain weight than normal individuals.[2] Otherwise they will emaciate progressively, despite normal appetite, digestion and absorption.

That acromegaly and Paget's disease are due to faulty internal secretions is not by any means proved, but for the purpose of this article no harm is done by so regarding them. What we see in these diseases is that certain tissues suddenly take a start and grow independently of any known changes in the amount or kind of food furnished to the individual. A group of cells takes on a new habit of growth and reproduction and rushes ahead under the guidance of forces wholly outside the pale or the ordinary intake and digestion of food.

IV. SLEEP.

Two years ago my attention was called by the following case to the possibility that emaciation might be due to loss of sleep. A plumber, aged 56, consulted his physician for substernal pain suggesting aneurism, but there were no pressure symptoms and no other physical signs except a well-marked shadow shown up by radioscopic examination and corresponding precisely to that which might be produced by a small aneurism. A remarkable feature about the case, however, was this: In the four months during which he had noticed the pain, he had lost 38 pounds of flesh (183 to 145), although his appetite and digestion had remained excellent throughout. His urine was normal and no other cause for the emaciation could be found. On account of this inexplicable loss of flesh and the absence of any signs of aneurism except the pain and the radiographic shadow, his physician was inclined to think that there was malignant disease in the mediastinum. After seeing this case in consultation and noting that throughout his illness his sleep had been considerably disturbed by pain, I looked up the records of 22 other aneurism cases recently seen in my clinic and in the other departments of the Massachusetts General Hospital and found that all but two of them had lost very markedly in weight and in sleep, though in most cases their appetite was unimpaired.

I have been unable to think of any sufficient reason for the loss of flesh in these aneurism cases unless it is true that loss of sleep (due to pain) prevented the normal processes of tissue repair on which the maintenance of nutrition, in part, depends. This theory is not proof, and will need, I suppose, a great deal of experiment to prove it, but meanwhile I have noticed one or two straws pointing in that direction. First, the haggard look so often seen in the faces of those who have passed a sleepless night. This must be due, I think, to an actual emaciation in the facial tissues. It certainly has all the appearances of local emaciation. Secondly, I have noticed that in some cancer cases, with good appetite and digestion, nutrition did not begin to fail until the pain was sharp enough to prevent a proper allowance of sleep. Thirdly, the loss of weight of some athletes as a crucial contest approaches seems to me perhaps best explained in this way.

2. v. Noorden: Deutsche Klinik., p. 207.

TABLE 2.—EMACIATION IN CASES OF THORACIC ANEURISM.

Name.	Hospital Reference.	Loss of Weight.	Remarks.
Mahon. . . .	Priv. Rec., B. 2, p. 237.	38 lbs, in 6 weeks.	Appetite and digestion good.
Smith.	594-74	32 lbs. in 16 mos. .	
Allerson . . .	594-42	40 lbs. in 7 years .	Symptoms for 7 years.
McCafferty. .	490-124	25 lbs. in 4 months.	
Shannon. . .	520-154	20 lbs. in 1 year . .	
Nicholas. . . .	565-34	17 lbs. in 2 months.	Appetite good.
Stone. . . .	549-162	35 lbs. in 4 months.	Digestion poor.
Winslow. . . .	553-162	50 lbs. in 10 years.	
Wheelwright. .	559-70	25 lbs. in 16 years. .	
Deffur	532-20	30 lbs. in 1 year. .	Appetite good, no distress.
Bernard. . . .	527-12	25 lbs. in 1 year. . .	No gastric symptoms.
Ebern.	527-138	21 lbs. in 1 year. . .	Digestion good, poor appetite.
Jenkins. . . .	531-102	45 lbs. in 6 months	Appetite and digestion good.
Gilkey.	541-56	20 lbs. in 2 years. .	Appetite and digestion good.
Kinsman. . . .	490-16	13 lbs. in 2 months.	Poor appetite.
Peck.	541-60	23 lbs.	No digestive symptoms.
Toosa.	526-96	60 lbs, in 2 years. .	Appetite good, slight dyspepsia.
Murray.	526-170	44 lbs. in 1 year. . .	Appetite good, no dyspepsia.
Cassini. . . .	515-88	20 lbs. in 4 months.	
. . . . .	17296*	8 lbs. in 1 year	
. . . . .	17366*	35 lbs. in 3 months.	
. . . . .	4569*	20 lbs. in 1 year. .	
Taylor	594-96	"Several pounds in a few weeks."	
Winters. . . .	565-42	Great emaciation.	
Johnson . . .	485-18	"Progressive loss of flesh."	
Forsyth. . . .	858-58	"Very little loss."	
Annebale. . .	275-23	No loss of weight.	

*Out-patient department. Average loss in 22 cases, 29.4 pounds.

I repeat that I do not consider that I have given proof of the truth of this suggestion that insomnia is a cause of emaciation. I mention it chiefly because I wish to get the opinion of other men on the point and to find out whether any observations besides those quoted have already been recorded.

V. EXERCISE.

On the well-worn topic of the relation of bodily exercise to nutrition I wish merely to emphasize two points:

1. In "building up" a patient by rest and forced feeding it is fat and not muscle that we build. There is no evidence to show that muscle can be increased except (a) by the natural growth of the body, (b) by the adaptation of the mature body to a gradual increase of muscular work, (c) by the extraordinary regenerative processes that occur in convalescence from wasting diseases.[3]

2. Exercise increases weight when it increases muscle and decreases weight only when the gain in muscle is overbalanced by a greater loss of fat. This explains why some athletes gain and others lose in weight in the earlier part of the football season before any of the other influences which affect them later in the season have become operative (insomnia, "staleness," neurasthenia).

VI. HEREDITARY, INDIVIDUAL AND PSYCHIC FACTORS.

Inextricably mingled in their operation are some of the individual peculiarities (inherited or acquired, physical or psychical) which affect nutrition. There are some persons whose tissues are so repellent that it seems as if no amount of stuffing with food of any kind would fill out their lean shanks. Others seem fatally predestined to obesity after a certain age and, despite a restriction of diet which would keep an ordinary person emaciated, they take on fat at an extraordinary rate.

Trainers are accustomed to say that nervousness and "overtraining" have a controlling influence in the loss of weight which is observable in many athletes when a "big game" gets near. Aspirants for political office and business men in crises lose weight under the conditions of anxiety and excitement which increase as the critical day approaches. Whether these physical influences affect us through their direct influence on metabolism or indirectly through loss of proper sleep (proper in quality as well as in quantity) I do not know. The subject is one of practical importance as well as of scientific interest and deserves careful study.

SUMMARY AND CONCLUSIONS.

1. Loss of weight (gradual or fairly rapid) is often observed as a part of the aging process in persons past middle life.

2. This emaciation is often associated with arteriosclerosis, possibly as a result of it, possibly as the concomitant effect of some third (unknown) factor.

3. The rapid gain in weight often seen in growing children and in the convalescence from wasting diseases is not directly a result of abundant food and may occur even when the food supply is far below normal. The gain must be referred to an extraordinarily rapid cell production due primarily to heightened growth-energy in the cells themselves.

4. That influences connected with the organs of sex may exert a controlling force on nutrition is strongly suggested by the changes in flesh and figure following parturition and the menopause.

5. The importance of internal secretions in the maintenance or perversion of nutrition is exemplified in the emaciation of Graves' disease, the increased weight of the myxedematous, and perhaps in the more local hypertrophies of acromegaly and Paget's disease.

6. The possibly decisive influence of insomnia on weight is suggested by the rapid emaciation sometimes occurring in cases of aneurism when sleep is prevented by pain, though appetite remains excellent.

3. Investigations of the metabolism of convalescents have shown that they gain weight and muscle even if their supply of food is so restricted that a normal person would lose weight on it. When the cells are thus aroused it is impossible to check their magnificent regenerative energy, even by semistarvation.

THE GENERAL CONDITIONS ASSOCIATED WITH INSANITY.

THEIR CONNOTATIONS AND CERTAIN DEDUCTIONS AS TO THEIR SIGNIFICANCE.*

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The thesis to be defended in this paper is formulated in the following statement: There can not be special change in an organ without general disease in the rest of the organism, and in the study and treatment of the special condition the general involvement and its extent are the most important.

There are two assumptions in this connection which may be made concerning the human organism, based on what is known of its cytology and what has been demonstrated as to the processes of its functional activity. First, that the primary functions are those of vegetation, and that all others are related and in sequence to some form of activity involved in the processes of nutrition; second, that the nervous system is the last in the order of

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

development and the most complex in its structure; also, the complexity of the structure and functions of the nervous system has increased in a direct ratio with the demands on the general organism, resulting from changes in and the increasing complexity of its environment. It may be further assumed that the functional cell, wherever found, has a limited potentiality, also a normal plane of response to the incident forces constituted in its environment. This plane of response will, naturally, vary with the individual, and, other things being equal, will depend for the level of its development on the combined capacities of the parents at the time of conception, the competence of the mother during the period of gestation, and the suitableness of the individual environment during the period of development. It follows, as the corollary of this statement, that if for any reason the potentiality of the functional cell is abnormally limited, or on account of untoward or disastrous conditions in the environment of the organism is manifested excessively, the limit of capacity in the area or organ will be prematurely reached and the process of degeneration begin. That this is true, arrested and defective development, instability in the nervous system, as well as the different tendencies toward degenerative processes in the vegetative organs abundantly prove. It follows then that in the study of the processes of disease we are concerned first with the capacity of the general organism, then with the evidence of functional incompetence or defective structure in the organ or part involved; and, finally, with the relation of the function of the organ involved to the nutritive or eliminative processes in the general organism. In other words, while the morbid histology in the organ may be special, and the symptomatology resulting from its involvement specific, the pathology is general and the disturbance of the functional activity in the different organs will be in proportion with the intimacy of their relation in function with the organ involved.

During the past twenty-five years many efforts have been made to put the study of insanity on a scientific basis, but so far none of the methods presented have met with universal acceptance. Men doing special work in medicine see in mental aberration a complication or the apparent result of disease conditions which come under their observation and with which they are familiar. Each one has tried to explain the manifestations of insanity from the standpoint of his special field. The gynecologist sees the cause of insanity in women in disease conditions in the pelvis, which may be associated with the insanity, the opthalmologist in the motor and visual mechanism of the eyes, the general surgeon in the results of cranial traumata or the complications of operative procedure. Among neurologists the effort is being made to explain the perversion of mental activity in terms of disease in the cerebrospinal sensory and motor apparatus, and they see the cause of the insanity in the morphologic change in the structure of the cortical cell. The medical men in hospitals for the insane are still hampered by the inertia of custom and tradition and the persistence of the metaphysical conception of insanity, so that they continue to erect the phases and alternations in the manifestations of mental aberration into entities, to which they apply the terminology of metaphysics. It is unfortunate that the terms used to express facts and describe phenomena do not have the same significance to all who use them, and this laxity of definition is more marked in the terminology of psychiatry than in any other branch of medicine, because, in adapting the language of metaphysics, the nomenclature has not been used etymologically. Consequently, terms purely metaphysic in their significance are used to describe conditions or express conceptions based almost solely on the data supplied by the study of development, the formulation of physiologic experiment and the revelations of morbid anatomy and histology. Besides, the manifestations connoted by this metaphysical terminology imply the creation from the phases and alternations in mental aberration of conditions that are *sui generis,* independent of the heredity of the individual affected, his experience or influences in his environment. Whereas, we have only to study the conduct of the individual who is insane to know that the phases of his insanity represent reversions, the alternations, exaggerations and perversions of the normal cycle of mental activity, while the extent of the reversion, the rapidity and extremity of the alternations, will be determined by the degree of loss of mental capacity. Consequently there has been the failure to recognize the inherent inconsistency between the conception suggested by the metaphysical term used to define it and the nature of the data on which it is based. Therefore, the fact that the conditions with which we have to do in the definition of insanity are purely physical is lost sight of or ignored, with the resulting failure to recognize that mental aberration, in its clinical and pathologic aspects, has to do primarily with the potentiality of the nervous organization of the individual, and secondarily, with the perverted or defective processes of metabolism, as they affect the nutrition of the nervous system. In other words, we have to recognize that the degenerative process which makes mental aberration apparent is primarily a general one, affecting the vegetative functions.

The following statistical studies are concerned with all of the patients admitted to the hospital in St. Peter during the past nine years. The object of this method of study was to present all of the facts obtained from the careful examination of the individual patient when admitted, together with a record of the information obtained as to his condition before coming to the hospital.

So far as possible we have avoided arbitrary arrangement and have followed what seems to us to be the natural sequence in the description of the conditions found. The only arbitrary arrangement has been the division of the patients into four classes, representing the different degrees of defect present and the form in which the degeneration is manifested. We have classed as "unstable" all of those individuals, without regard to age, who have become insane and apparently completely recovered. Under the heading "primary degeneration" we have classed all those individuals who have become insane during the period of adolescence and who have not recovered. We class as "consecutive" those who have become insane during the period of adult life as the result of physical disease, mental or physical strain or overwork and who do not recover. Under the head of "senile degeneration" we class all those who become insane after fifty-five years of age and lapse into dementia.

Although this classification is apparently arbitrary, it really is not, except as to the assumption that all who become insane represent some degree of instability or defect.

Under "heredity" are classed those constitutional conditions usually described as diathetic, and which have been found to exist in the parents or near relatives of the patient.

Under "concurrence" is recorded the presence of diathetic conditions in other members of the family in the same generation.

Under "mental state" we designate the manifestations of mental aberration present at the time of admission, and in such terms as seem to us most primary and least liable to misinterpretation.

Under "form of sense perversion" we enumerate the manifestations of perversion in the special senses as we have been able to detect them. The same plan has been followed in the two other subheads of the second table. The statement of the manifestations of intellectual impairment as we have observed them, and the nature of the delusion that they represent.

In the third table is recorded our observation of the physical defects found and the affections of the general nervous system.

The other tables cover the result of physical examination and need no explanation.

These tables, and the methods of study involved in their preparation, have been in use long enough for us to formulate some conclusions as to their value as a means of record and their significance with relation to insanity and its manifestations. The result of this method of study has been to determine the relation of the performance of the vegetative functions to mental activity in the insane, and the influence of disease conditions, or impaired functional activity in the body organs, in the production and maintenance of perverted mental activity, as well as the relation between chronic degenerative changes in these organs and similar changes in the brain.

TABLE 1.—GENERAL MANIFESTATIONS OF ABERRATION (MEN).

Degree of Defect.	Heredity.							Concurrence.					Mental State.					Form of Sense Perversion.							Form of Intellectual Perversion.					Nature of Delusion.			
Form of Degeneration.	Neurotic.	Insanity.	Alcoholism.	Phthisis.	Rheumatism.	Cancer.	No Information.	Insanity.	Phthisis.	Cancer.	Epilepsy.	Rheumatism.	Excitement.	Depression.	Delirium.	Stupidity.	Dementia.	Olfactory.	Visual.	Auditory.	Gustatory.	Tactual.	Visceral Consciousness.	Sexual Excitement.	Sexual Perversion.	Not Apparent.	Grandiose Ideas.	Depreciatory Ideas.	Persecutory Ideas.	Confusion.	Religiosity.	Systematized.	Variable.	Undefined.	Not Apparent.
Unstable	24	29	25	25	7	6	59	12	10	..	..	1	72	83	7	3	29	..	33	79	5	74	13	6	6	62	13	14	87	86	18	3	40	80	42
Primary	70	97	46	79	19	32	115	32	25	..	..	3	111	213	8	33	252	5	48	163	7	20	26	45	50	159	45	22	148	183	55	7	49	179	147
Consecutive	54	106	45	75	29	31	231	68	47	2	1	8	195	291	20	33	312	4	83	289	20	40	55	54	20	183	101	59	247	254	86	21	130	300	128
Senile	18	37	19	20	4	3	99	14	7	5	2	2	64	91	7	8	130	1	29	77	4	17	21	4	2	87	17	9	103	89	16	7	39	104	53
Totals	166	269	135	199	59	72	504	126	89	7	3	14	442	678	42	77	723	10	193	608	36	151	115	109	78	491	176	104	585	612	175	38	258	663	370

TABLE 1.—GENERAL MANIFESTATION OF ABERRATION (WOMEN).

Degree of Defect.	Heredity.							Concurrence.						Mental State.					Form of Sense Perversion.								Form of Intellectual Perversion.					Nature of Delusion.			
Form of Degeneration.	Neurotic.	Insanity.	Alcoholism.	Phthisis.	Rheumatism.	Cancer.	No Information.	Insanity.	Phthisis.	Cancer.	Paralysis.	Epilepsy.		Excitement.	Depression.	Delirium.	Stupidity.	Dementia.	Olfactory.	Visual.	Auditory.	Gustatory.	Tactual.	Visceral Consciousness.	Sexual Excitement.	Sexual Perversion.	Not Apparent.	Grandiose Ideas.	Depreciatory Ideas.	Persecutory Ideas.	Confusion.	Religiosity.	Systematized.	Variable.	Undefined.	Not Apparent.
Unstable	26	53	19	39	20	13	73	22	11	6	6	4		75	121	26	12	39	1	36	27	4	10	12	11	8	76	19	44	104	88	40	7	26	110	38
Primary	44	67	23	51	24	73	90	25	9	..	1	5		55	167	7	39	190	5	29	107	6	10	13	47	15	101	9	36	134	136	35	3	32	111	92
Consecutive	41	78	31	68	18	113	164	57	24	6	2	1		96	94	13	37	12	9	74	229	20	21	30	25	11	121	31	92	249	164	80	22	78	205	65
Senile	8	14	3	12	3	65	89	16	6	1	1	1		40	72	4	21	105	2	21	53	8	6	12	5	1	58	11	22	79	61	15	6	20	60	37
Totals	119	212	76	170	65	266	416	120	50	13	10	11		266	454	50	109	546	17	160	416	38	47	67	88	35	356	70	194	566	449	170	42	156	486	232

From Jan. 1, 1894, to Jan. 1, 1904, there were admitted for the first time 2,366 persons; 1,429 men and 937 women. Out of this total, 165 men, approximately 12 per cent., and 181 women, approximately 20 per cent., were classed as unstable; 476 men, approximately 33 per cent., and 246 women, approximately 26 per cent., were classed as primary degenerates; 582 men, approximately 41 per cent., and 388 women, approximately 41 per cent., were classed as consecutive degenerates; 206 men, approximately 14 per cent., and 122 women, approximately 13 per cent., were classed as senile degenerates.

In this study the term heredity is used to indicate any diathetic condition in the parents or grandparents that, on account of its interference with vitality, might result in the production of defective offspring.

One hundred and sixty-six men and 119 women had a neurotic heredity; 269 men and 212 women had a heredity of insanity; 135 men and 76 women had a heredity of alcoholism; 199 men and 170 women had a heredity of phthisis; 59 men and 70 women had a heredity of rheumatism; 72 men and 266 women had a heredity of cancer. Concerning 504 men and 416 women we could not obtain definite information, but what evidence there was, coupled with the history of their mental status, would have classed them relatively among the different subdivisions here given.

In the families of 126 men and 120 women there was a concurrence of insanity; in the families of 89 men and 50 women phthisis; in the families of 7 men and 13 women cancer; in the families of 3 men and 11 women epilepsy; in the families of 14 men rheumatism; in the families of 11 women paralysis. It is interesting to note that in both heredity and concurrence, insanity and phthisis occurred with the greatest relative frequency. The association of cancer with the heredity and concurrence of so many of the women is also significant.

We note that 422 men and 266 women were excited; 678 men and 454 women were depressed; 42 men and 50 women were delirious; 77 men and 109 women were stupid; 442 men and 546 women were demented.

All of the patients who were depressed at the time of admission became excited in some degree before they recovered or lapsed into dementia, while all of the patients who were excited at the time of admission became depressed. Besides, those patients who were depressed at the time of admission, who recovered, and were again admitted, were excited in the beginning of the second attack, while those among them who were admitted for

the third time were again depressed. The converse of this alternation occurred in those who were primarily excited. Furthermore, in the small number of cases where it was possible to trace with a fair degree of accuracy the life history of the patient, it was found that there had been alternating periods of exaltation and depression from the period of puberty, increasing in intensity and becoming more prolonged as the individual grew older and the conditions in his environment more exacting. The final outbreak, which made the mental aberration apparent to his family, followed physical deterioration or the operation of some untoward experience, so that there was sufficient loss of mental capacity to deprive him of self-control.

We describe as demented only those patients in whom the mental reduction has gone so far as to make the loss of mental capacity the most conspicuous element in the insanity.

Ten men and 17 women had olfactory hallucination; 193 men and 160 women visual hallucination; 608 men and 416 women auditory hallucination; 36 men and 38 women gustatory hallucination; 151 men and 48 women tactual hallucination; 115 men and 67 women visceral consciousness; 109 men and 88 women sexual excitement; 78 men and 35 women sexual perversion; while in 491 men and 356 women the form of sense perversion was not apparent.

One hundred and seventy-six men and 70 women had grandidose ideas; 104 men and 194 women depreciatory ideas; 585 men and 566 women persecutory ideas; 612 men and 449 women were confused; 175 men and 170 women were the victims of religiosity.

We do not describe a patient as confused unless the confusion is the predominant element.

Forty men and 42 women had systematized beliefs; in 258 men and 156 women the beliefs were variable; in 663 men and 486 women the beliefs were undefined; in 370 men and 232 women the nature of the delusion was not apparent.

The mental state of the patient was always dependent on the form of sense perversion and the nature of the delusion. That is, those who heard or saw what was pleasing or gratifying were exalted; while those who heard, saw or felt what was disagreeable, or that suggested danger or misfortune, were depressed or excited. Sensations from diseased viscera, the embarrassed respiration and cardiac uneasiness arising from gastrointestinal distension, gives rise to ideas of poisoning, as does the fetid breath arising from nasopharyngeal disease, or the disagreeable gustatory sensations associated with a foully coated tongue; while the formications and paresthesiæ associated with neurasthenia and vasomotor disturbance suggest personal defilement or the passage of the electric current. Under the influence of physical states resulting in autointoxication, delirium or stupor develops, according to the degree of exhaustion in the nervous system. It was also noted that delirium was most common in those patients that were classed as unstable, and that the delirium was always preceded by a period of restlessness, insomnia and refusal of food, with the physical evidence of exhaustion.

In 91 men and 150 women there was asymmetry of the head; in 447 men and 594 women there was asymmetry of the face; in 17 men and 84 women there was general deformity.

TABLE 2.—PHYSICAL DEFECTS AND AFFECTIONS OF THE NERVOUS SYSTEM (MEN).

	External Defects.			Reflexes.											Gross Diseases of the Nervous System.						General Nervous Disturbance.									
	Asymmetry.			Superficial.			Knee Jerk.			Pupils.					Paresis.		Paralysis.				Tremor.							Spasm.		
	Head.	Face.	General Deformity.	Exaggerated.	Diminished.	Absent.	Exaggerated.	Diminished.	Absent.	Dilated.	Contracted.	Unequal.	Response Absent.	Response Impaired.	Local.	General.	Cerebral.	Bulbar.	Spinal.	Epilepsy.	Tongue	Facial Muscles.	Limbs.	Intention.	Rest.	Incoördination.	Clonus.	Local.	General.
Unstable	7	60	2	10	10	47	80	21	9	39	1	17	. .	22	44	5	. .	. .	. .	1	87	28	69	68	20	32	10	14	. .	3
Primary	31	161	8	26	21	62	64	56	19	105	3	25	5	42	104	4	2	2	1	34	149	31	125	106	45	55	33	29	3	3
Consecutive	46	95	3	22	25	166	270	66	49	145	22	49	19	93	120	63	16	7	9	16	250	90	263	223	83	139	39	39	3	3
Senile	7	67	4	5	5	86	66	28	18	27	12	15	8	53	49	54	7	5	7	7	63	29	89	71	33	94	10	8	. .	. .
Totals	91	383	17	63	61	361	480	171	95	316	38	106	32	210	317	126	25	14	17	58	549	178	546	468	179	320	92	90	6	6
(WOMEN.)																														
Unstable	29	119	19	10	9	76	84	39	10	93	7	17	2	43	72	12	2	2	....	4	64	16	64	70	15	61	6	20	3	3
Primary	52	153	27	5	16	73	112	33	15	110	1	25	4	60	105	3	1	....	....	25	90	21	75	75	34	64	9	36	18	18
Consecutive	55	242	20	9	23	79	186	67	25	166	6	32	7	109	168	25	3	4	....	11	142	35	158	164	74	122	10	55	6	6
Senile	13	80	18	3	3	76	53	26	10	32	11	14	7	57	52	19	6	2	....	5	47	17	47	55	18	60	11	17	15	15
Totals	149	594	84	27	51	304	435	165	60	401	25	88	20	269	397	59	12	8	....	45	343	89	344	364	141	307	36	128	42	42

TABLE 3—PHYSICAL DISTURBANCES FOUND ON EXAMINATION (MEN.)

	Impaired Nutrition.	Constipation.	Renal Inadequacy.	Insomnia.	Acute Disease in One or More of the Vegetative Organs	Chronic Disease in One or More of the Vegetative Organs.	Acute Contagious or Infectious Disease.	Acute Alcoholism.	Chronic Alcoholism.	Narcotic Habit.	Organic Structural Defect.	Consecutive Degenerative Changes in the General Organism.	Consecutive Degenerative Changes in the Nervous System.
Unstable	53	119	40	108	18	25	7	57	57	5	4	62	12
Primary	176	317	69	193	47	61	6	5	5	1	6	68	12
Consecutive	263	445	80	334	109	116	10	76	76	8	15	262	23
Senile	117	154	4	112	69	84	11	24	24	1	2	147	12
Totals	609	1035	193	747	243	286	34	162	162	15	27	539	9
(WOMEN.)													
Unstable	106	167	24	134	33	42	8	10	10	6	12	49	6
Primary	117	210	10	165	30	26	9	....	....	..	16	26	1
Consecutive	237	326	41	260	69	94	22	6	6	3	31	164	6
Senile	89	107	11	91	25	47	18	3	3	..	10	109	3
Totals	549	810	86	650	157	209	57	19	19	9	69	348	16

In 63 men and 27 women the superficial reflexes were exaggerated; in 61 men and 51 women they were diminished; in 361 men and 304 women they were absent. The knee jerk was exaggerated in 480 men and 435

women; in 171 men and 165 women it was diminished; while in 85 men and 60 women it was absent.

In 317 men and 297 women there was local paresis; in 126 men and 59 women general paresis; in 25 men and 12 women there was cerebral paralysis; in 14 men and 8 women bulbar, and in 17 men spinal paralysis; 58 men and 45 women had epilepsy.

In 549 men and 343 women there was a tremor of the tongue; in 178 men and 89 women there was tremor of the facial muscles; in 546 men and 344 women there was tremor of the limbs; in 468 men and 364 women the tremor was with intention; while in 179 men and 141 women it was a rest tremor.

In 320 men and 307 women there was inco-ordination; in 92 men and 36 women clonus was present; in 90 men and 128 women there was some degree of local spasm; while in 6 men and 42 women the spasm was general.

was subinvolution. There were 333 cases of laceration of the cervix and 424 of laceration of the perineum. In 238 cases there was cystocele and in 229 rectocele. There were also a great variety of minor ailments present, as is shown in the tables. Severe pelvic trauma or extreme septic involvement were very uncommon. There were only 79 cases of disease of the ovaries, and none of destructive involvement of the pelvic viscera.

Even where pelvic disorder of some apparent severity was present no complaint was made by the patient, nor was there any evidence from the history accompanying her, that pelvic disease had been complained of or suspected by the family physician.

Treatment, both palliative and operative, however, was always efficient in improving the physical condition of the patient, and, to the extent that a source of irritation was removed, quieting her as well.

TABLE 4.—URINE ANALYSIS (MEN).

| | Chemistry. | | | | | | | | | | | | | | | | | | | | | | | | Microscopy. | | | | | | | | | | | | | | | | | | |

the organism was equally obvious, as shown in the statistical records concerned with primary degeneration.

In all of the cases there was some degree of mental reduction; and in those cases where excitement was present on admission, it had been preceded by a period of confusion and depression, while in those who were depressed there was antecedent confusion and irritability. The absence of intelligent observation on the part of the relatives of the patient precludes the obtaining of accurate information as to when the mental aberration first manifested itself; but so far as we have been able to determine from repeated and persistent cross-examination, it is safe to say that there had been periods of confusion, suspicion and dread for at least a year before the untoward conduct or overt acts of the individual made the nature of his condition manifest to his friends; because the degree of mental reduction had become so great that, under some special strain, inhibition was no longer possible, and the impulses, centrifugally generated, could no longer be controlled. For obvious reasons, the degree of defect in the nervous organization would determine the extent and permanence of the mental reduction and the order in reversion, as well as the rapidity of the progress of degeneration.

In the progress of degeneration some form of special sense perversion is always apparent. Most frequently auditory, next visual, then tactual and gustatory; and the two latter are most common in those cases where chronic disease involving the digestive tract or the eliminatory organs has been present for some time. The delusions which result grow out of the experiences of the individual which have been disagreeable, mortifying or disastrous, which his confusion and failing mental capacity lead him to associate with his immediate environment; and into consonance with which he interprets the language and conduct of his friends and associates. Introspection and morbid self-consciousness magnify and intensify all self-relations, while the neurasthenia, which results from the effort to overcome the constantly increasing confusion, develops an erethism which registers all impressions in a staccato key, and turns the every-day experiences and trials, heretofore borne with equanimity, into calamities; while the conduct of his friends and the attitude of those about him becomes pregnant with suggestion of accusation, denunciation or threat, and the resulting belief concerns that which has been anticipated and dreaded. Or else, as the result of that euesthesia which follows some forms of intoxication, grandiose ideas develop, which may degenerate into the phantasmagoria of acute exaltation, either material or beatific. Again, a dysesthesia may be present instead, accompanied by painful sensations, dread, fear, agitation or stupor.

The clinical significance of this method of study rests on the assumption that the mind, so called, is not an entity, and can not be treated directly. Also on the fact that the nervous system supplies nothing toward its own nutrition, and is not concerned in the elimination of the waste materials of its own functional activity, but is, on the contrary, dependent on the vegetative organs for its maintenance. It may also be assumed, in consonance with current hypotheses concerning the rôle of autointoxication in the production of disease of the nervous system, that the failure in the functional activity of those organs, which have to do with the elimination of waste materials from the general organism, would have a more important bearing on the development and persistence of insanity than would a similar failure in the functional activity of those organs having to do with the preparation of food materials for assimilation. In

TABLE 5.—GYNECOLOGY.

| Totals. . . | Unstable. . . Primary. . . Consecutive. . Senile. . . . . | | |

this connection it should also be recognized that, as it is the principal function of the general nervous system to direct the activities of the rest of the organism, a failure in dirigent function would, of necessity, interfere with the normal activity of the vegetative organs, thus reducing their capacity for work, lowering the general vitality and further decreasing the capacity of the general organism for adaptation to external relations, by involving the retention, not only of the waste products of its activity, but also the generation of toxic substances from the food materials taken into the digestive tract. Finally, we have to consider that, while these conditions affect the majority of individuals in some degree, only a very small percentage of those affected ever become the victims of mental aberration or degenerative brain disease.

Our experience has taught us that, while the extent or degree of the mental disturbance is not necessarily in proportion with the amount and nature of the disease or functional failure in the vegetative organs, in those cases where the degenerative change in the general nervous system is going on, with progressive mental reduction, there is a similar process, developing *pari passu* in the rest of the organism, slowly and unequally in ordinary dementia, rapidly and comparatively uniformly in general paresis, insular sclerosis and hereditary chorea. From these observations it seems obvious that there must be involved in the development of insanity, not only the directly acting cause furnished by the environment of the individual, but also instability or defect in the development of the general nervous system, resulting in a limitation of its potentiality to a varying degree. Furthermore, the groups into which the various manifestations of insanity would naturally fall, would be made up of those individuals in whom there was the same relative degree of defect, and the variations among individuals in the different groups would be the obvious result of difference in experience and environment. In other words, mental activity must necessarily be correlated with all of the organic processes, of which it is the synchronous expression.

Primarily, then, we have to deal with the cerebral potentiality of the individual, as influenced by the conditions in his environment which exhaust this potentiality directly by overtaxation, or indirectly by the influence of impaired vitality in the general organism in further reducing the mental capacity of the individual. Next in importance comes the recognition of the fact that in any given environment the general conditions are practically uniform for all who are included; consequently, if these conditions are harmful to some of those who live under them, there must be some inherent weakness in the individual which unfits him to adapt himself to them, so as to conserve his own welfare. When this inability is in the direction of physical activities the result is apparent to every one; but, strangely enough, it has not been recognized as equally obvious that the lack of mental capacity which shows itself in imperfect control and incapacity for persistent effort, are evidences of instability and defect, and therefore the expression of a limited cerebral potentiality. A careful study of the natural history of insanity will show, also, that the mental aberration exists for a long time before it is manifested in the conduct of the individual, and it is a well-known fact that it may be present during his whole life, without materially interfering with his relations with those about him. What is it, then, which makes manifest the insanity? It is the loss of control of the activities that are manifested in conduct! And this loss of control always follows in the wake of mental reduction; that is, the process of dementia. It is for this reason that those who are not familiar with insanity, from constant association with the insane, can not comprehend the existence of mental aberration unless it is manifested in bizarre conduct, or appreciate mental alienation that is not shown by criminal acts or imbecility. It is, for this reason, too, that degeneration is thought of as a result instead of as a process and dementia as a terminal condition only, instead of as a loss of mental capacity, which may be slight and transcient or extreme and progressive. may be slight or transcient or extreme and progressive.

Postmortem, in acute insanity, there is nothing distinctive; and the periencephalitis and encephalitis which may be present does not differ from inflammation in the brain and its membranes in those who are not insane. In a few cases, where a large trephine opening in the anterior portion of the skull has enabled us to study the appearance of the membranes and brain surface during life, the distended arachnoid space, flattened convolutions and the white streaks along the vessels did not differ materially from the postmortem appearance in dementia, except that after death the fluid is most commonly gelatinous. The most conspicuous change in the condition and appearance of the coverings of the brain results from the thickening and adhesion of the dura and pia along the median fissure. These adhesions and the fibrous increase interfere with the emptying of the piai veins, and narrow and lumen of the longitudinal sinus. While it is probable that some pial adhesion occurs in almost every one after 35 years of age, these adhesions are at the vertex. It is the progress of this adhesion forward and its extension laterally that is the most constant concomitant of progressive degeneration of the brain in the intellectual sphere. The peculiar arrangement of the lymph channels in the brain also adds to the difficulty, when the circulation is interfered with, so that autointoxication in the brain may be apparent and persistent, when there is no evidence that it is general; and the arrangement of the cortical blood vessels shows how stasis may be present when the general circulation in the brain is not interfered with. The thickening of the pia and the progressive occlusion of its vessels in certain areas explains how easily the nutrition of the cortex may be interfered with permanently, while the resulting lymph and venous stasis mechanically accelerates the progress of atrophy. So that, postmortem, we find flattened convolutions and shallow fissures. These changes are, however, general, not specific, nor peculiar to the insane, although always present in cases of terminal dementia.

In cases of dementia the frontal lobes, anterior to the precentral fissure, are always atrophied, and the extent of the atrophy is in definite proportion with the degree of dementia. This is the only constant macroscopic change in the brain in our experience, but there is usually associated with this shrinkage in the frontal lobes atrophy in the convolutions surrounding the insula, and this atrophy is usually most marked in the convolutions of the operculum. Next in order of frequency is dimpling over the angular gyrus and the superior parietal lobule.

The morbid histology of the brain, in those dying insane, is not only not distinctive, but, as I have shown,[1] similar changes can be produced in the lower animals by starvation and exhaustion. In terminal dementia the

1. "The Pathology of Delirium," American Journal of Insanity, October, 1903.

changes found are similar to those present in senility, only differing in degree and in the number of elements involved.

That which distinguishes the human being from other animals is his ability to appreciate the relation of self to environment, and that which distinguishes human beings from each other, is the extent to which this appreciation is developed, as shown by their conduct. In the light of current knowledge, both physiologic and pathologic, it is obvious that the mind, so called, is not an entity, but, on the contrary, is constituted in the cognition and relation of the impressions which come to the brain through the special senses, and is manifested in the direction of the resulting activities that are concerned with the maintenance of the individual. The recognition and re-relation of the impressions that result from these activities is a more complicated process, and is best described by the term intellection, because it has to do with the correlation of recent and pre-existing impressions as they affect the welfare of the individual.

The intellectual horizon of the individual is necessarily limited by his mental capacity, while its extent will be determined by his environment and the nature of his experiences. The same response would not be expected from the individual of limited capacity and no culture as from the keen intellect highly cultivated; nor would the definition of their experiences be equally valuable with relation to their individual welfare. Mental activity is not persistent indefinitely on the same plane any more than is physical activity. That is, there is a cycle consisting of the normal plane of activity, out of which develops a period of exalted activity, to be followed by a more or less gradual fall to the subnormal and the return to the normal. These variations are most apparent and extreme during adolescence, most conspicuous in the unstable, and they may be aberrant in the order of their recurrence. The persistence of the normal plane of activity is also dependent on the physical condition of the individual. Vigor will prolong the exaltation of capacity, while lowered vitality will intensify the depression from the normal plane. Besides, under certain conditions representing strain or exhaustion in the nervous system, a rapid variation in the complements of the cycle may occur, with entire disappearance of the normal plane of activity. Therefore, there is represented in the phases and alternations in the mental activity of the ordinary individual all of those manifestations which, when extreme, are described as the evidences of insanity. That is why confusion is the first manifestation of insanity, to be followed by aberration of relation, which results in special sense perversion, that, in its turn, forms the substantive basis for delusion, and the centrifugally generated impulses by which it is manifested. The emotional manifestations are the obvious sequence and the natural result of the character of the ideas generated, the form of the belief and its definition with relation to the welfare of the individual. However, it is only when the mental reduction has gone so far, and the confusion has become so great, that the individual ceases to be able to recognize and re-relate the impressions coming through the senses from his environment, and properly co-ordinate the activities involved, that he loses control of himself to the extent that his condition becomes apparent to those about him.

All manifestations of motion in the human organism, outside of those automatically generated to meet the demands of the vegetative processes and avoid obvious sources of danger, are in response to the impressions received from the conduct of others, and their relation with similar pre-existing impressions, as they have generated and been manifested in our own conduct. Mental activity, then, as ordinarily understood, is manifested in the cognition and relation of the impressions received from our environment of the conduct of others in comparison with our own. The capacity to do this evidences our power of attention, while the ability to persist must necessarily be dependent on the vitality of the general organism. Any failure in this process would mean confusion and inco-ordination from incomplete relation, just as is shown in the motor sphere in locomotor ataxia, chorea or athetosis.

Just as the ordinary processes included in the manifestations of consciousness in the sane involve, first, the impression through one of the senses, to be followed by impression through one or more of the others; then the picture formed by the process of relation, the fitting in and combining with analogous pre-existing impressions, the persistence of the picture, its proof by comparison with others, as well as its consonance with like processes in other individuals. So, in the insane, there are like processes going on in the same regular sequence, the result differing because of the perversion of the elements of the cognition, while the aberrant functioning of the brain in the re-representative processes leads to incongruous arrangement and confusion. The sequence is complete in the belief which results from the persistence of the confusion and inco-ordination.

The natural history of insanity shows that mental perversion and aberration are concerned with the first and simplest of these processes, while mental reduction implies loss of capacity to carry out the more complex processes. In other words, mental perversion and aberration are always related with those forms of activity which have for their function the cognition of the purely animal relations; that is, they are concerned with the simplest forms of impression through the senses, while the loss of mental capacity affects the processes of intellection. In the lower types of mental development there is a more or less complete absence of intellection, so that the individual is easily confused by mental effort, sensual hallucination is very common, and is manifested in superstition, taking the form of religiosity, the seeing of ghosts, infliction by witchcraft, the administration of poison, etc.

All of us hear sounds, see objects, perceive odors and tastes which we attribute to something else than their real origin. We are subject to disagreeable tactual sensations and to visceral consciousness. Again, under the influence of fatigue, mental or physical, there is the tendency to lapse into self-consciousness and introspection, with the resulting doubt and suspicion, which is the characteristic of the child and the imbecile. The actions of others, heretofore a matter of indifference, take on a new meaning and significance. And, if the circumstances which determined the morbid introspection were mortifying or distressful, we become furtively suspicious and resentful. However, experience and the evidence of demonstration correct our false impressions. But, in the presence of limited cerebral potentiality, under these same conditions, the transition from temporary to persistent confusion would be easy, and the aberration resulting so marked as to materially interfere with the welfare of the individual and his relations with those about him.

The following conclusions seem to be warranted by the data presented: In dealing with insanity and its manifestations we are concerned with the cerebral po-

tentiality of the individual in considering its nature; with heredity and environment in determining its form and sequence; while the evidence of the involvement of the general organism in the degenerative process must be our guide in anticipating its progress and termination.

DISCUSSION.

DR. G. R. CLARK, Dearborn, Mich., said that, so far as the clinician is concerned, Kraepelin's work has enabled him to classify insanity much better than he could previously. Kraepelin has taken the psychologic view that certain groups of symptoms mean certain things. Take, for example, dementia præcox. The mannerisms are not stereotyped, but the condition includes a liability to impulse simply by the term dementia præcox. It makes no difference what the clinical picture may be. One person may have an impulse to touch the tip on his nose, while another may have an impulse which deters him from doing things, but the underlying cause is the same. Kraepelin calls attention to the fact that the catatonic mannerisms and excitement are two entirely different things from a psychologic point of view. The constitution of the United States declares that every man shall be born free and equal. There never was a bigger lie written, from an embryologic standpoint. Every man that is born has tissue instability, and that we all recognize. Is it not quite possible, aside from assuming instability at the time of his birth, to say that a man is unstable from the very beginning in embryo in certain definite cases? The individual may be brought up with glandular clubfoot. We are only commencing to learn a little about glandular pathology. We know that there is a certain kind of insanity in Addison's disease. We have not seen enough of it, and it has not been studied sufficiently for us to know exactly what the symptomatology is. Dr. Clark thinks that the different tissues in the body are elaborated by distinct secretions. For instance, the thyroid gland has to do with the ideal function of the body. Furthermore, overexertion of that gland produces exophthalmic goiter. He suggested that the glands of Douglass have something to do with the production of these mental conditions. From the pathologic point of view, some disturbance can be demonstrated in the metabolism, in the perspiration and in the other excretions. We can find indican in the urine and we notice the peculiar odor, and can say it is potassium sulphate or something of that sort, but are we exactly sure that there is not some little volatile product, some animal elimination, present which may have much to do with the symptomatology?

DR. H. G. BRAINARD, Los Angeles, said that insanity is based on two general conditions: First, that of nervous instability, and, second, that of stress. The nervous stability, of course, may be interfered with by any condition, perhaps by heredity, from the embryo, as has been suggested, and, again, by things which come later in life, as acute or chronic diseases, and, still further, by the stress of every-day life and the disturbances of metabolism. One person with a well-balanced nervous system may stand all sorts of stress without any insanity, but the man who starts out in life with an instable nervous system is easily upset by any disturbance in metabolism.

DR. J. H. MCBRIDE, Pasadena, Cal., said that it is fortunate that Thomas Jefferson was not an embryologist. If he had been, he would not have written the Declaration of Independence. He did not mean that all men were equal mentally or morally, but that they were, or should be, equal before the law. Medical literature is much indebted, in its terms and even in its conceptions, to Herbert Spencer, who, among other things, showed how degeneration works in organic beings, how it undoes, step by step, the work of organization. As our mentality has been an evolution, as its physical basis has been built up from the simple to the complex, in ever-increasing intricacy of structure, so insanity, being a degeneration, begins at the highest and last evolved and undoes in reverse order the work of evolution. No classification of insanity is satisfactory. Those of Dercum and Kraepelin are perhaps the best.

DR. H. A. TOMLINSON, St. Peter, Minn., said that unfortunately he had to pass over that part of his paper which gave the reason for the classification used, so that the basis for this method of classification is not apparent. The objection to the classification that is so popular at present in this country is that metaphysical terms are used to describe physical conditions; and not only that, but the phases and alternations in mental activity which, in their ordinary manifestations, are normal, are grouped together and classed as entities. Any one who has lived with the insane and watched them closely knows that every form of mental disturbance included in the classification referred to may be present during the course of the insanity of any given individual. For example, take the terms excitement and depression: Properly used they describe states of feeling, not forms of disease, and they are dependent on some antecedent impression, either from the environment of the individual or centrifugally generated. Excitement or depression, however, can not differ in kind; they can only vary in degree, and in all cases of insanity excitement and depression are the most common manifestations of mental disturbance. Back of the excitement or depression are the confusion and sense perversion that gave rise to them. In Dr. Tomlinson's experience the greatest harm in the metaphysical classification of insanity and the concentration of attention on the manifestations of mental aberration, is its effect on the physician unfamiliar with insanity. He bases his diagnosis on nothing, and in his treatment chases the will-o-the-wisp of mental entity. Again, there is a method of classification that would assign certain forms of mental disturbance as the result of certain forms of physical disease, such as cardiac, renal, septic, etc., losing sight of the fact that among the vast number of people who suffer from these disease conditions only a very few show any evidence of mental disturbance. People become insane, why? Because of defective nervous organization, and not because of the cardiac or renal disease. The physical disease simply upsets the unstable nervous organization. It is the same with degeneration. This condition represents the antitheses to development, and while it may vary in degree, or in the rate of its progress, it does not differ in kind. Besides, no matter what may have been the cause of the process of degeneration, the histologic changes that result will be the same kind, differing only in degree. Dr. Tomlinson has been able to demonstrate that the histologic changes found postmortem in acute insanity manifested in depression or excitement, and in the brains of those who were not insane, but died in the delirium of typhoid fever or septicemia, were not only the same in kind, but also in degree. He has also produced the same conditions in animals by bringing about death from starvation and exhaustion. It is for these reasons that he advocates a classification of mental aberration that shall be based on the cerebral potentiality of the individual as shown by the degree of instability or defect present; and a method of treatment based on the clinical study of the physical conditions present, and not on the form or nature of the mental disturbance.

DR. WILLIAM HOUSE, Portland, Ore., called attention to a statement made by Dr. Tomlinson in the discussion that there is no such thing as insanity due to heart failure. Dr. House is quite willing to agree that there is no specific form of insanity limited to disease of the heart, and yet he insists that disease of the heart, of the kidneys or of almost any other organ, unquestionably may act as a cause of true insanity. It is unfortunate that this is not more frequently insisted on, for, after all, results must be achieved not so much by therapeutic attention to the purely psychologic details as to the physical causes underlying them, and to the inability to grasp this relationship we owe many of our failures to achieve good results in the treatment of the insane.

Reproduction of Bony Structures by Mammals.—At a meeting of the London Zoological Society, according to *Nature*, Mr. Oldfield Thomas exhibited a specimen showing a partial regeneration of the caudal vertebra in a dormouse. Other specimens had been obtained showing similar regeneration and proving apparently that the partial reproduction of bony structures not hitherto observed in mammals, was possible in the dormouse (*Graphiurus*).

AUTOLYSIS.*

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NEW YORK.

TISSUE DISINTEGRATION.

The most constant property of living matter is disintegration. This precedes every other manifestation of life of the simplest and of the most complex animated organism. The development of a fertilized egg begins with disintegration of its original structure. When the egg is placed under conditions which make the initial disintegration impossible, life remains suspended. Disintegration also is the most lasting property of living matter, for when all other functions are extinct this property is still in evidence, and, if conditions are favorable, the disintegration proceeds until all that could remain of organization or of structure disappears, giving place to a mixture of organic and inorganic substances.

Disintegration of organic matter present in the cells and tissues is also the primary source of that form of vital energy which controls most functions of a living organism. Contraction of muscle, secretion of glands, peristaltic movements of the gastrointestinal tract, growth and reproduction of an organism, are possible only so long as the breaking-down process continues. This has been realized by physiologists at all times. However, the mechanism and the exact nature of the chemical reactions associated with animal functions has never been very clear, and even to-day the question remains a topic of considerable controversy.

Lavoisier was the first to emphasize strongly the similarity between the chemical reactions in the living organism and those in the process of combustion. Ever since that time physiologists have adopted the term combustion in order to signify the chemical reactions in the organism which result in the production of animal energy. Physiologists speak of burning or non-burning in the human or in the animal body of proteid, fat or sugar, of burning of the body tissues and of body cells. Indeed, the ultimate products of the reactions in the body are very similar to those on the burning of carbonaceous material. Carbon dioxid, water and heat are formed in both instances. However, there has always existed an utter lack of information regarding the agents causing the powerful oxidation of organic material in the animal body. The simplest way out of the difficulty seemed to ascribe the power of combustion to a peculiar property of the living cell.

In recent years there has accumulated a great number of observations tending to show that various functions previously regarded as the result of life, as the result of cell assimilation and disintegration by the animal tissues, are actually occasioned by substances which can be isolated from the living cell. An instance illustrative of this statement is found in the work on alcoholic fermentation. Formation of alcohol from grape sugar by the yeast cell was regarded as a chemical reaction brought about by the activity of the cell. Alcohol thus was considered a catabolic product of cell metabolism. Mme. Manassein, and more convincingly Buchner, have demonstrated that from the cell can be obtained one substance which is capable of accomplishing the alcoholic fermentation of sugar in the same manner as the living cell. This startling discovery marks a radical change in our conception of the process of life. For centuries it was thought that the activity of a complex organism was needed to manufacture spirits out of grape sugar, and the foregoing work demonstrated that the cell may be crushed, its life may be extinct, and one substance soluble in water may be extracted which possesses the power to accomplish the work of the entire cell. True, the substance is of a very subtle nature and needs to be handled with great care. It does not resist the action of heat and other strong chemical and physical agents, but while intact it is capable of inducing chemical reactions into which it apparently does not enter itself, and thus is capable of performing work out of proportion to its own mass. Substances endowed with this power are designated enzymes or ferments. The work of Buchner caused a very intense interest to be directed toward the older and unsystematic work on the enzymotic processes in the cells of the simple and complex organisms.

As already stated, the source of all vital and animal energy lies in tissue disintegration, and the prevailing conception has been that the disintegration was brought about by the power of the living cell to burn its own components. It is the great merit of Salkowski to have shown that a cell or tissue in which all visible signs of life have disappeared still retains the power of self-dissolution, of self-disintegration, of autolysis. True, the phenomenon had not escaped the observation of earlier workers, and in 1871 Hoppe-Seyler wrote:[1] "All organs suffering death within the organism, in the absence of oxygen, undergo softening and dissolution in a manner resembling that of putrefaction. In the course of that process, albuminous matter gives rise to leucin and tyrosin, fat to free acids and soaps. This maceration, identical with the pathologic conception of softening, is accomplished without giving rise to ill odor, and is a process similar to the one resulting from the action of water, acids and digestive enzymes." In 1874 the French chemist, Schutzenberger[2] observed similar changes in yeast which had been allowed to remain for from 12 to 15 hours in water suspension at a temperature of from 35 to 40 C.

However, before going into the details of the chemical analysis, attention has been called to the structural, morphologic changes which cells and tissues undergo when they are placed in conditions which do not permit continuation of life. It is well known that animal tissues and organs are readily invaded by micro-organisms, causing putrefaction. The application of the recent methods of aseptic surgery allows the removal of organs from the animal body and the preserving of them free from all contamination with micro-organisms. Hauser,[3] as well as Rindfleisch and Meissner previous to him, succeeded in preserving tissues for months and years free from infection with any bacteria. In organs kept in absolutely sterile condition Hauser observed general softening, and microscopically he noted the destruction of the most typical structural part of the cell, of the nuclear material, and decay of the mass of the cell, made apparent by the development of changes which are designated by pathologists as fatty degeneration.

Thus the term softening is not merely a figure of speech, but applies to an actual occurrence. This is made evident particularly through the work of Schutz-

* The fourth lecture in the Harvey Society course, delivered at the New York Academy of Medicine.

1. Tubinger Med. Chem. Untersuchungen, 1871, p. 499.
2. Compt. rend., vol. lxxviii, and Bull. de soc. chemique, vol. xxi, p. 204.
3. Arch. f. exper. Path. u. Pharm., vol. xx, p. 162, 1886.

enberger and the workers who followed him. Normal fresh organs on extraction with boiling hot water give off only a small fraction of their constituents, while those that have undergone the process of softening allow a very considerable part of their substance to pass into the boiling water. Thus, fresh yeast on boiling with hot water leaves a residue consisting of from 20 to 21 per cent. of its original weight, while the residue of yeast kept in water for from 12 to 15 hours does not exceed 13 per cent. However, in the experiment of Hauser, although the tissues were placed in conditions unfavorable for continuation of life, death set in slowly, and the possibility is not excluded that the softening was accomplished by the vital force not yet completely extinct. Also in the experiments of Schutzenberger this possibility was not excluded; besides, yeast always contains bacteria and it is difficult to separate the part of the changes wrought by the action of micro-organisms from that induced by the surviving yeast cell.

Salkowski was the first to preserve the material employed in his experiments under conditions which checked all other functions, leaving unassailed only the one of dissolution, in conditions in which bacterial growth was impossible. This was achieved by the use of chloroform water instead of the pure. Salkowski repeated the experiments of Schutzenberger on yeast and arrived at the same conclusions as the first observer. He extended the work to animal tissues, using the liver and muscle. The results are best seen in the following table:

From 1,000 grams of liver were extracted by hot water	Autolysed organ.	Control.	Difference.
Organic substance	45.97 gms.	33.73 gms.	12.24 gms.
Ash	7.95 gms.	7.21 gms.	0.74 gms.
Phosphoric acid	1.957 gms.	1.359 gms.	0.598 gms.
Nitrogen in form of nitrogenous substances.....	6.239 gms.	3.152 gms.	3.087 gms.

In the main experiment the finely-divided organ was mixed with three times its weight of chloroform water and allowed to stand and at given intervals analyzed. In the control experiment the organ was heated and then further treated in the same manner as in the principal experiment. The table clearly shows that, on standing, substances soluble in hot water have developed in the organ. Very similar changes occur in tissues subjected to the influence of digestive enzymes, either in the digestive tract or outside of the body. Because of this analogy Salkowski introduced the term "self-digestion" in order to designate the process occurring in tissues allowed to stand under antiseptic conditions. For reasons which will be made clear in the course of the discussion, the process later was named by Hofmeister "autolysis."

Thus the researches of Salkowski have established the fact that tissues, placed in conditions which do not allow contamination with live matter, undergo changes resembling those occurring during process of digestion; but they offered no information regarding the rôle played by the process in the economy of the organism, in those transformations of matter which create and maintain life. It was still undecided whether or not the capacity of self-digestion was a universal property of all tissues. The probability was not excluded that the autolysis of an organ was brought about by the action of enzymes absorbed from the gastrointestinal tract and transported to the various organs. The researches following those of Salkowski endeavored to give an answer to those questions. The solution of the first problem was comparatively an easy matter. It required only to repeat his experiments on various other organs. This was accomplished most successfully by the efforts of Hedin and Rowland.[4] It may be noted here that the last two investigators employed in their experiments not the entire tissue nor the tissue extracts, but the plasma of the organs. In this manner they made certain that no cellular elements were playing any part in their experiments and that the reactions were caused by a soluble substance present in the plasma. Previously Schwiening,[5] a pupil of Salkowski, had established the same fact by employing filtered tissue extracts. The work was further extended by Martin Jacoby[6] and by Stookey ad myself.[7] As a result of all the work it may be regarded as established that the power of self-digestion is shared equally by all organs. The solution of the second problem, namely, of the origin of the autolysing power, required more ingenuity and perhaps more work. Attempts were made to obtain the desired information in various ways. If the digesting power present in the organs is due to a substance derived from the pancreas, the autolysis of organs must be influenced by the same factors in the same manner as pancreatic digestion; further, if that assumption be correct, one would expect to find among the products of autolysis those substances which arise on tryptic digestion.

Matthes sought to solve the question by removing the pancreas from dogs and studying the self-digesting power of their organs. The chemical composition of animal organs is very complex, but the pancreatic gland is capable of disintegrating all the principal tissue constituents, although it resorts to a different mechanism, perhaps to a different substance, for the digestion of the individual substance. The principal components of tissues are albuminous material, carbohydrates and fats. In the course of self-digestion all these components are disintegrated, and it is a matter of convenience to discuss separately the change which each of the components undergoes in the course of autolysis. Of all enzymotic processes that resulting from the breaking up of the proteid molecule has been studied in the greatest detail. For this reason the study of the proteolytic action of organs was employed for the investigations into the origin of the autolytic power of tissues.

Two proteolytic enzymes of distinct individuality have always been known—pepsin, elaborated by the glandular apparatus of the stomach, and trypsin, formed in the pancreatic gland. The principal point of distinction between the two substances is that one requires for its action the presence of acid, while the other is most active in the presence of alkali. Further, it has generally been accepted that pepsin is incapable of producing the same degree of cleavage as trypsin. The formation of crystalline products of amino-acids has been noted only on tryptic digestion. Most typical for the cleavage by the ferment of the pancreatic gland is considered the appearance of a substance giving a peculiar color test with bromin, named tryptophan. In the course of digestion by either of the two enzymes, albumoses and peptones are formed.

Biondi, a student of Salkowski, has noted that the proteolytic action of the liver is facilitated by the presence of acids. This difference in intensity of digestion under the two different conditions is made very conspicuous by the following table:

Out of 1,000 gms. of liver passed into solution.	Experiment 1. With 0.28 HCl.	Experiment 2. Without HCl.
Organic substances	100.10 gms.	59.0 gms.
Ash	26.90 gms.	11.12 gms.
N. in nitrogenous substances....	11.76 gms.	7. gms.
Albumose	Trace.	Trace.
Pepton	None.	None.

4. Zeitsch. f. physiol. Chem., vol. xxxii, 1902.

5. Virchow's Archiv., cxxxvi, 1894.

6. Zeitsch. f. phys. Chem., vol. xxx, 1900.

7. Jour. Med. Research, vol. x, 1903.

The conditions influencing the intensity of autolysis were studied in greater detail by Hedin and Rowland,[4] whose investigations were made on tissue plasma obtained by Buchner's method. It was established by these writers that the self-digestion of the majority of organs is facilitated by the presence of 0.25 per cent. of acetic acid and is depressed by the presence of alkalies, by calcium carbonate and magnesium oxid. The only deviation from this, according to Hedin and Rowland, is in the muscle tissue, where the intensity of digestion is not affected by the presence of alkali or acid. On the other hand, cardiac muscle is subject to the general rule of autolysis. The autolysis of nerve tissue, and of the testes also, is facilitated by the presence of acid, as was demonstrated by Stookey and myself.

These observations are important, for the reason that they make very improbable the supposition that self-digestion of tissues is caused by trypsin deposited in the organs by the blood supply. On the other hand, Salkowski, in his early work on autolysis, has noted the appearance of leucin and tyrosin, and in this respect the proteolytic action of animal tissues resembles tryptic digestion. Contradictory to this seemed the observations of Biondi.[8] This author could not detect tryptophan in the experiments in which the absence of bacterial growth was made certain. Another peculiarity of the autolytic cleavage noted by Biondi is the comparatively insignificant formation of albumose and of peptone. Jacoby also, in his very exhaustive study on autolysis, invites special attention to the foregoing difference between tryptic and autolytic digestion. On the other hand, Jacoby demonstrated tryptophan among the products of self-digestion of tissues. Thus the chemical process of autolysis bears some resemblance to either form of digestion, peptic and tryptic, and yet is different from each of them. This alone makes it very probable that animal tissues do not borrow their power of disintegration from either gastric or pancreatic gland, and that self-digestion is one of the general properties of living or, rather, surviving organs.

Additional evidence in support of these assumptions was brought forward by Matthes.[9] It is well known that urine of normal individuals contains a proteolytic enzyme resembling pepsin. Matthes demonstrated that after the removal of the stomach of dogs the enzyme ceases to be eliminated by the urine. It was natural on the basis of this experiment to view the stomach as the source of the urinary pepsin. The same method of investigation was applied by Matthes to the study of the origin of the self-digesting power of organs and tissues. Dogs were deprived of their pancreas and allowed to recover from the operation. The organs were then examined for their proteolytic power. No difference could be detected between the organs of the normal and those of the operated animal. Thus, all evidence seemed unanimously to support the view that self-digestion is a constant property of surviving tissue.

However, for the interpretation of the rôle of this function in the economy of the living organisms, it still remained to be established whether or not the process of self-disintegration takes place also in life. Jacoby[6] was the first to give experimental trial of the question. For this purpose he performed on dogs the following operations: The hepatic artery and the portal vein were ligated and, after several hours, the liver was extirpated and analyzed for amino-acids. Leucin and tyrosin were found to be present. Further, he obtained the same results on ligating a part of the liver. These substances were also obtained by Jacoby from organs extirpated aseptically and kept under conditions in which contamination was impossible. It may be remarked that all these methods are open to some objections. More convincing seems to me the analysis of the developing organism. It has been known for some time, through the work of Schulze and his pupils, that in the course of germination and growth of plants, substances appear which arise also on proteolytic digestion of the seeds. I have made a similar observation on the developing egg of fish and of fowl.[10] In the course of development of the egg one can notice the breakdown of the albuminous matter and the appearance of products of the nature of nitrogenous acids.

So, at the present time, there is sufficient evidence for the assumption that disintegration or self-digestion is a constant occurrence in living as well as in surviving tissues. However, there is still a lack of information regarding the rôle of this function in the mechanism of life. In the animal tissue, organ or cell one has to distinguish two different parts, one representing the organized mechanism controlling its function, the other consisting of various organic substances stored up or deposited in the organs, as a supply of fuel material. Blood plasma and lymph, which envelop every part of the organ, are not integral parts of its tissue. They only furnish the material which the organ may or may not use. White of an egg and the greatest part of its yolk are only building material for the developing organism.

In physiology there are two views regarding the production of animal energy. One is that a substance can not be utilized by a living cell unless it has been assimilated and transferred into organized cell substance. Liebig was the author of this theory and Pflüger most vigorously defended it. On the other hand, Carl Voit claimed that in higher organisms the principal supply of fuel material is furnished to the organs by the blood. The albuminous matter carried to the organs was named by Voit "circulating proteid." Opinions on the subject are still divided and it is possible that in a way both views are correct.

Since there was some foundation for the view that the process of autolysis is the one which controls tissue disintegration, it seemed important to make clear whether or not the mechanism is capable of breaking down albuminous matter derived from other sources than that of its own body substance. The first observation in this direction was made by Theobald Smith, who noted that fresh tissues removed from the organism under aseptic conditions were capable of digesting gelatin. On the other hand, Martin Jacoby[11] noted that during the process of liver autolysis, of the proteids, only the globulins suffered a disintegration; and in a later work he observed that the self-digesting liver was completely incapable of digesting lung tissue. Thus, on the basis of this work, one would be led to the view that the process of autolysis is incapable of causing the digestion of circulating proteid, and that the two processes are totally independent one of another. However, Hedin[4] has shown that the spleen possesses the power to digest not only its own proteid material, but also the proteids of the blood. Thus the question still remains an open one.

PRODUCTS OF TISSUE DISINTEGRATION.

The work thus far reviewed possessed primarily theoretical interest only. It aimed to elucidate the mechan-

8. Virchow's Archiv., vol. cxliv, 1906.
9. Archiv. f. exp. Path. u. Pharm., vol. li, 1904.
10. Zeitsch. f. phys. Chem., vol. xxxv, 1902.
11. Zeitsch. f. phys. Chem., vol. xxx, 1900, also vol. xxxiii, 1901.

ism controlling the disintegration of tissue components in the living and in the surviving organs. Nevertheless a detailed knowledge of the products of tissue autolysis is of importance from the standpoint of practical medicine. In the human organism, as well as in that of many animals, all substances which are consumed as food and nourishment, no matter how greatly they differ in their chemical composition, are finally broken down into a few very simple bodies which are rejected by the organism through the kidneys, bile and other excretory mechanisms. Urea and carbonic acid are the two substances into which nearly all foodstuff is transformed. In a complex organism the metamorphosis is a gradual process. Before a nitrogenous substance is transformed into urea it undergoes numerous degradations. Before sugar is oxidized to carbonic acid it suffers numerous changes. Further, it is not improbable that in a very complex organism individual organs are concerned only in one definite phase of the transformation, leaving the other organs to continue and to complete the work. In his recent address on this subject Professor v. Noorden[12] pointed out that the information regarding the nature of intermediate products of metabolism, as well as the seat of their formation, is lacking. Attention of investigators has turned to the study of the products of autolysis of various organs in the hope of filling in the gap in our knowledge of the mechanism of nutrition and of self-preservation of the organism.

However, the study of the substances arising in the course of autolysis was preceded by very active work on the normal composition of tissues and tissue components. Indeed, it was to be expected that within the body tissue constituents would break down into their component parts. Recent years are marked by astonishing progress in the knowledge of the chemical nature of tissues. It was owing to this progress that the study of autolysis was made a comparatively easy matter. As already stated, the principal tissue components are albuminous matter, sugars and fat. The changes which each one of these components undergoes in the course of self-digestion has been the subject of special investigations.

Under the term proteid is generally understood the substance which represents the most important and most characteristic part of living matter. It is colloidal in nature and is composed of various nitrogenous acids. On heating proteid with strong acids or alkalies, the original substance disappears, giving rise to the nitrogenous acids. Of those already known are the following:

Glycocoll.	Lysin.
Alanin.	Arginin.
Aminovalerianic acid.	Histidin.
Leucin.	Prolin.
Glutamic acid.	Tryptophan.
Phenylalanin.	Cystein.
Tyrosin.	

Of the proteids, one group attracts special attention. Its members are present in greatest quantity in the nuclei of all cells, and it has been assumed that the function of the nucleus is closely associated with the presence of these substances. They are named nucleins, nucleoproteids, nucleoalbumins, etc. They are more complex than ordinary proteids, containing in their molecule, besides the usual constituents, a body termed nucleic acid. This acid is composed of substances to which a considerable rôle in the pathogenesis of disease has been attributed. Its components are as follows:

Phosphoric acid, carbohydrate, thymin, uracil, cytosin, adenin, guanin, hypoxanthin.

Normally, components of simple and complex proteids occur as such in tissues in very insignificant quantities. But it is found that in the course of self-digestion an organ may undergo such deep changes that nothing remains of its original structure, in its place the following substances appearing:

	Pancreas	Liver	Spleen	Kidney	Testes
Glycocol	—	—	—	—	—
Alanin	+	+	+	+	+
Amiuobutyric acid	?	?	+	?	+
Aminovalerianic acid	+	+	+	+	+
Leucin	+	+	+	+	+
Glutamic acid	+	+	+	+	+
Aspartic acid	+	+	+	+	+
Pyrrolidin carbonic	?	?	+	+	?
Tyrosin	+	+	+	+	+
Phenylalanin	+	+	+	+	+

A glance at the table shows clearly that the action of the autolytic process in organs is as powerful as that of strong acids combined with high temperature. Nearly all the products which are obtained on prolonged boiling of proteids with strong mineral acids arise also in the course of autolysis. However, there are noted some differences in the two processes. If it be allowed to name substances appearing on cleavage with mineral acid as primary cleavage products, the distinction may be made that on autolysis the primary products undergo further transformation. It is a matter of convenience to discuss the points of difference according to the three principal groups of substances in which they occur, namely: 1. The nitrogenous acids containing only one nitrogen in their molecule, monoamino-acids. 2. Acids with more than one nitrogen in the molecule. (The substances of this group arising from proteid cleavage were named by Kossel hexon bases. They generally possess basic properties.) 3. Substances resulting from the nuclear degradation, nuclein derivatives or nuclein bases. The most appropriate method for investigation was: First, to study the products obtainable on boiling organs with strong acids; second, to study those arising on autolysis of the same organ, and, finally, to analyze the substances appearing on boiling with strong acids of organs previously subjected to self-digestion.

On acid cleavage all the amino-acids are obtained which are known to appear on the breaking down of proteid material. Among the end-products of self-digestion of the pancreas, Emerson[13] discovered oxyphenylethylamin, which is not known to be present in the proteid molecule, and which may be regarded as a secondary product derived from tyrosin. Further, on autolysis of various organs the formation of glycocoll was not observed, and prolin could be demonstrated only in a few experiments. It should be remarked that the present methods of analysis of amino-acids are not fully satisfactory and too much weight should not be attached to the results thus far obtained. However, the results of the analysis of the amino-acids obtained from the fresh and from the self-digested glands seem to indicate that in the course of the latter process some destruction of the substances takes place. This may be

12. THE JOURNAL A. M. A., Oct. 28, 1905.

13. Hofmeister's Beiträge, vol. 1, 1901.

seen from a table showing the results of experiments not yet published, although completed:

	Fresh spleen. 5 pounds.	Autolysed spleen. 5 pounds.
Glycocol	0.700	0.700
Alanin	8.6	1.7
Aminobutyric and amino valerianic acids	5.25	5.00
Leucin	14.75	12.0
Aspartic acid	2.24	0.8
Glutamic acid	3.12	1.25
Phenylalanin	1.15	1.33
Prolin	Present.	Present (inactive).

The knowledge of the further phases of amino-acid metamorphosis is rather meager. Stolte[14] has shown that amino-acids exposed to the action of tissue extracts give rise to ammonia, and Magnus-Levy[15] has demonstrated the formation of fatty acids in the course of autolysis. Diamino-acids and other basic substances of the proteid molecule suffer a similar disintegration. Thus, on prolonged autolysis of the pancreatic gland or of the gastric mucosa, the formation of diamins from diamino-acids, a process analogous to the transformation of tyrosin into oxyphenylthylamin, was observed by Lawrow,[16] Langstein[13] and by myself.[17] It has also been noted that a very considerable part of the diamino-acids suffers a more complete disintegration. Thus five pounds of fresh spleen yield on hydrolysis 3.2 gm. of arginin and 2 gm. of lysin and the same quantity of digested glands only 1.5 gm. of arginin and 1.2 gm. of lysin. The mechanism controlling this degradation was explained by the brilliant discovery of Kossel and Dakin.[18] These authors have demonstrated in various organs the presence of a special enzyme whose function it is to decompose arginin into urea and diaminovalerianic acid. The same enzyme was found by Shiga in the yeast cell.

(To be continued.)

IRRIGATION OF THE ABDOMINAL CAVITY.

FROM A BACTERIOLOGIC STANDPOINT.

J. WALTER VAUGHAN, A.B., M.D.

DETROIT.

The mortality in cases of peritonitis depends on two things—first and foremost, the virulence of the infecting germ; second and of almost equal importance, the area involved. Given the same organism, capable of forming the same toxin and the same amount of toxin, the severity of the disease will depend on the size of the abscess, i. e., the area involved. In an article by Young[1] the opinions of twenty-five of our foremost surgeons were given on the advisability of flushing out the abdominal cavity in cases of acute diffuse suppurative peritonitis; "fifteen were in favor of irrigation, while ten opposed it." Those who support irrigation claim that they wash away toxic material which would otherwise be absorbed, while those who oppose it certainly have a much better mortality record to uphold their method of treatment.

The study of bacteriology until recent years has dealt mainly with the morphology of organisms and their cultural characteristics. During the past few years, however, we have been enabled to study bacteria from the standpoint of their chemical nature, because of the fact that they have been grown and obtained in large amounts at one time. The Roux flask was the first step toward this end, and the final result, whereby great quantities of a given germ could be harvested, as a farmer harvests his wheat, has been obtained by means of the large tanks of V. C. Vaughan. To obtain a good growth by either of these means the first and essential requirement, after the medium has been rendered sterile, is to spread a thin layer of the germ substance equally over the surface of the medium. This is done by means of water suspensions of the germ—beef-tea cultures.

The peritoneal cavity may be compared to either the Roux flask or the tank. It is a large sterile cavity under ordinary conditions, but when danger threatens in the form of perforation from appendiceal or other causes, it attempts to protect itself by the formation of adhesions, and thus limit the area wherein the germ can grow. The test-tube is formed as compared to the tank. In animal experiments, where the germ is injected directly into the peritoneal cavity, the animal invariably dies, no protecting adhesions are present and there is a general diffuse peritonitis. The peritoneal cavity has not been forewarned; a large amount of a watery suspension of the given germ has been suddenly thrust into it, and the result is inevitable. In the human body also we find many cases in which perforation takes place almost immediately after the first symptoms; the peritoneum has been unable to protect itself, no adhesions are formed, and we have what is termed acute diffuse suppurative peritonitis. Those who advocate irrigation say that they wash this infectious material out of the abdomen. In reality what do they do? They form a watery suspension of the germ present and force it to every part of the abdominal cavity, thereby causing a true general peritonitis. The test-tube or flask has been changed into the tank and the harvest will be proportionately large.

A general peritonitis, and by that I mean a condition in which all parts of the peritoneal cavity are involved, is a rare and, I believe, impossible condition unless brought about by some such method as the above. Anatomically the cavity is too well divided to permit of an infection of its entire surface through even the most rapid of perforations. The area involved will undoubtedly be large, but let us consider the adhesions formed as the advance guard of the defense, and we shall still have the natural anatomic boundaries as the reserve, when the advance has not been able to cope with the invasion. Roughly, from this standpoint, the peritoneal cavity may be divided into at least three compartments. The pelvic, that below the transverse colon, and that above, the latter of which may again be divided into two, one of which we will term the gall-bladder region and the other the perigastric. In the female the pelvic region is happily more distinctly separated from the abdomen than in the male. From the standpoint of extension of infection the sigmoid may here be regarded as the dividing line. The adhesions between the sigmoid and surrounding structures in fully 90 per cent. of cases are means of preventing the infecting process from extending upward and invading the true abdominal cavity. When abscess formation fails in appendiceal or typhoid rupture the transverse colon is the natural barrier to a further extension of the process upward. Why, then, should we bathe that part of the peritoneal cavity above with a fine suspension of fecal matter and infectious material by means of irrigation? In cases of perforation of gall-bladder or perforating ulcer of either pylorus or duodenum the upper strait is involved—that above the transverse colon. No other part of the abdominal cavity has such definite barriers

15. Hofmeister's Beiträge, vol. v, 1904.
16. Ibid., vol. II, 1902.
16. Zeitsch. f. phys. Chem., vol. xxxiii, 1901.
17. Amer. Jour. of Physiol., vol. xii, 1904.
18. Zeitsch. f. phys. Chem., vols. xli and xlii, 1904.
1. THE JOURNAL A. M. A., Aug. 26, 1905.

to the extension of any infectious process as the region of the gall-bladder and pylorus. E. W. Andrews[2] says:

> There is no part of the cavity which has such invariable boundaries as the gallstone surgical field. Unlike most parts, it is not subject to the floating in or intrusion of other viscera. Its surroundings, to a certain extent, shut it off and prevent it from draining into or out of the rest of the cavity. In form it is a triangle, bounded above by the liver and appendages, below by the colon and mesocolon, and to the left by the stomach, gastrohepatic omentum and duodenum. . . . This space can also be conceived as a spherical triangle, or as a pyramid, with its base on the abdominal wall, and its apex in the foramen of Winslow.

Who now would think of carrying infectious pus over these natural bounds and into the surrounding cavity by the aid of irrigation? Yet the same rule holds good for any portion of the abdomen and is equally true of appendiceal rupture and perforations in typhoid.

The reaction caused by such great mortality following flushing of the abdominal cavity in acute diffuse suppurative peritonitis has come in the method of treatment of which Ochsner was the first and foremost advocate—absolute rest with no operative interference—thus allowing Nature to do her best. This after all is what the treatment consists of, and when Nature is undisturbed how does she attempt to contend with the invasion? Pathology teaches us that the local changes are first a serous exudate which later becomes fibrinous in character. This we know is the means by which the infection is walled off and abscess formation occurs. Why, then, should we wash this exudate away and thus prevent, or at least retard, such a result by means of irrigation? In the local exudate, as well as in the entire blood stream, a great increase in the number of leucocytes can always be observed, and while as yet we do not fully understand what part these leucocytes play in the resistance to infectious processes, yet we know that they play a part of much importance in the successful issue of these cases. These also are washed away when irrigation is employed. Outside of this, Nature protects with chemical substances which we term antitoxins, but we look upon these not as a local product to resist infection, but rather as a general one. However, the amount of such a substance required will vary directly with the intensity of the infection, which may be said to be governed partially by the area involved.

It is a common clinical observation that shortly after irrigation of any abdominal abscess there is a noticeable rise in the temperature of the patient. This we ascribe to increased absorption, that is, we have not only washed out the débris of dead cells, but the protecting exudates covering the peritoneal surface have also suffered and new exudates must be formed before the toxic products are again separated from direct contact with the blood stream and lymphatic channels. A given organism will soon die out if kept in the same test-tube, but if new media be constantly added or frequent transplantation take place its life may cover a greatly extended period.

Realizing then that Nature's most efficient safeguard is in the formation of adhesions and that the percentage of cases in which these cause permanent after trouble is very small, let us consider how we can best aid in what Nature has failed to do. From a bacteriologic standpoint irrigation is entirely contraindicated. The surgeon will tell you when the abdomen is opened because of any infective process that drainage is the object sought. A large perforated rubber or glass tube furnishes the best means of obtaining the freest drainage, and this is frequently used and with most satisfactory results. However, always in conjunction with this and sometimes alone, one or more gauze drains are inserted into the abdominal cavity. This is done because clinical experience has taught the surgeon that his patient will do better and that recovery in a greater per. cent. is assured if the gauze drain be used. Given the choice between gauze and tube drainage and, I venture to say, by far the majority of surgeons would choose the gauze, and their reason would be that clinical experience proves that the mortality is far less when this form of drain is used. Now why should this be so? To my mind the answer is found by reverting again to that second factor in the causation of the mortality, namely, the area involved. At present we have no substance which is so effectual in the stimulation and formation of adhesions as sterile gauze. The gauze drain helps Nature to build up that safeguard which she is called on to supply, and hence helps to limit the area of infection. After three or four days this drain, which has played so useful a part in the limitation of the area involved, may become an absolute menace, for when the exudate has become dried upon its surface it plays the function more of a cork than a drain. But by this time the adhesions are well formed and the tube should be substituted for the gauze, since free drainage is now the essential in order that the pressure within the abscess may be as small as possible, and thus render slight the danger of infecting that portion of the abdomen without the abscess by rupture of the same.

It is my opinion that the habit of irrigation in infectious conditions of the peritoneum is a pernicious one, absolutely without either scientific or clinical endorsement, and one which appears to be as difficult for the general surgeon to give up as anterior suspension or fixation has been for some gynecologists. Many of the leading surgeons have abandoned irrigation in peritonitis from appendiceal trouble, it is true, and their results alone should cause others to follow in their steps. Why should the same principle not be adopted in typhoid perforation, and, indeed, perforations from all other causes? I believe that if such a course were to be adopted the present mortality would be markedly reduced.

1939 Woodward Avenue.

2. THE JOURNAL A. M. A., Sept. 16, 1905.

THE CONSERVATIVE SURGERY OF THE TUBES AND OVARIES.*

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LOS ANGELES.

It is twenty years since Schröder first advocated the preservation of the remnant of normal ovarian substance in excision of small cysts of the ovary. August Martin, about the same time, reported a number of cases in which normal portions of the tube and ovary were preserved and the degenerated portion removed. W. M. Polk a year or two later presented the same subject to the American profession and submitted his brilliant results in the conservation of these structures. Since that time contributions have been made to this field of work by Dudley, Kelley, Morris and others, showing definite results in relieving pain, establishing normal menstrual function, and, in a number of instances, being rewarded by seeing the patient bear children.

There could be slight excuse for calling attention at

* Read before the San Bernardino (Cal.) County Medical Association.

this late day to the many ingenious procedures for the partial restitution and preservation of these structures so vital to the happiness and well-being of women, were it not a fact that these possibilities are still grossly and continually disregarded. There is scarcely a week passes without the painful evidence of some patient suffering a loss, to her irreparable, of either one or both ovaries and tubes, ablated for ovarian neuralgia, hydrosalpinx, obliterating salpingitis, or worse than all possibly, simple ovarian cyst with minor adhesions.

The mental distress which overcomes these unfortunate subjects in the sudden and artificial induction of the menopause, the deprivation of the possibilities of motherhood, the definite belief that they are to become shattered and to lose those delicate and essential elements which distinguish their sex—these realities and fears are sufficient in themselves to cause any surgeon to reflect on his responsibilities. And no one of even moderate experience will question the frequency of the appalling consequences of this crude and wretched work.

The prevalence of long obsolete procedures in surgical technic is no fault of our masters, who have filled the literature of every language with a modern gospel which is free to all of us. The fault is ours and lies stark and accusing at our own threshold. We are not guiltless, if in our apathy we have not harkened to good teaching nor heard the warning for him whose crass ignorance shall cause innocent ones to suffer through long and helpless years.

Improvement in this field of work is to be looked for in a more patient and careful study of the pathology of ovarian and tubal disease. It is necessary to get away from the fads which have misled us and drawn us unthinkingly after false teachers, who would find in the extirpation of a vital and essential organ the relief from a painful symptom. It is necessary to distinguish between surgical procedures which are mutilating and those which are conserving and remedial. Only by thoughtful and studious consideration of the physiology and physiologic chemistry of these structures and the relative degrees of existing pathologic change can one found a judgment which has enduring value.

The wild claims of the advocates of Battey's operation are fresh in the minds of all of us. Many, if not most of us, I daresay, have been blind followers of the blind in this grievously erratic doctrine. We can atone for these errors only by a persistently earnest effort to analyze our cases with greater conscience and precision, and to choose a surgical procedure which will the most perfectly restore the organ to its normal function.

It is beyond the limits of this paper to discuss the multiform influences contributing to disease of the pelvic organs. Outside of the violences of incorrect diet, bathing, clothing, exercise and social dissipation, there is that great trinity—septic metritis, gonorrhea and tuberculosis—which forms the sum total of concrete disease of the tubes and ovaries.

It may well be said at this juncture that any and all of these conditions might be prevented, and that it were more philosophic to deal at length with measures looking to the prevention of these potent infections than to efforts to preserve the shattered remnants of their destructive work. We need have no quarrel with the sanity of this idea, and preventive medicine has no fairer field for its cleverest effort, but the surgeon is still the latest to be called and is confronted by a complicated pathology which admits of but one appeal.

CONSERVATION OF THE OVARIES.

This discussion need not deal with those large ovarian cysts, now so rarely met, in which all ovarian substance has perished, nor with extensive dermoids, hematomata, parovarian cysts or that extremely rare neoplasm, fibroma of the ovary. Carcinoma, tuberculosis and abscess call for the total extirpation of the affected ovary and, in the first two, frequently of the uterus and adnexa. It is possible, however, to save an ovary partially destroyed by a small abscess. It is just as rational and defensible as to spare the parotid, mammary gland or testicle under like circumstances.

The commonest affection of the ovary calling for surgical relief is the small cyst. These cysts usually occur in numbers and they vary greatly in size. They may be pseudo-retention cysts—unruptured Graffian follicles—or true cystic degenerations of the corpora lutea. In any case they add a preternatural weight and create a tension in the tunica albuginea which results in a dragging burning weight and in so-called ovarian neuralgia. I have seen many cases in which this excessive weight threw the uterus backward out of its normal axis and held it tight against the rectum in the hollow of the sacrum. Often these large cystic ovaries become imprisoned deep down in the cul-de-sac of Douglas, acting like spherical valves, the force of whose suction not only keeps the vessels in the tube, ovary and broad ligament congested, but produces and maintains a dorsal version which is both painful and obstructive. In almost every instance the tunic will be found greatly thickened, causing ovulation and the menstrual period to be very painful.

A great deal was said in former years concerning the "cirrhotic" ovary. We know now that this is a myth and that what was designated ovarian "cirrhosis" was nothing more than a somewhat distinctly defined collection of the scars of ruptured follicles. No doubt there are women in whom the ovaries show a tendency to contract and, through the physiologic process of ovulation, to lose parenchyma which relatively gives the appearance of increase of stroma. That condition, however, is no more pathologic nor is it more frequent than the hypertrophic ovary which I have met repeatedly and which in some cases I have observed to be twice the size of the normal organ. Microscopic examination shows a relative increase in the reticulum in the one case, in the parenchyma in the other. Neither condition is pathologic, although I have found that removal of at least half of the hypertrophied ovary gives immediate relief from the weight and burning. Many so-called cirrhotic ovaries are doubtless the remnants of previous small ovarian abscesses or the result of adhesive bands from septic inflammation of the uterus and tubes. In these cases the irritating scar may be resected and the normal portion of the ovary left, and this may be laid down as the rational surgical procedure in every instance of ovarian pathology, save the exceptions heretofore mentioned. It may be stated dogmatically that oöphorectomy, except in this restricted sense, is not only obsolete, but that it is utterly wrong and unjustifiable, and this doctrine will apply to at least 90 per cent. of all pathologic ovaries.

The technic of excision of the cysts and degenerated portions of the ovary is not difficult, but calls for nice dissection and delicate suturing with fine plain catgut. It will be found that in many instances the walls of these cysts can be peeled out with fine dissecting forceps as soon as the tunic is incised. The incision should pass through the superior edge in the long axis of the organ and it will be found that at the base there is much ovarian tissue which is absolutely normal.

I can recall many patients operated on for tuberculosis or for septic destruction of both tubes and apparently of both ovaries, in whom it was possible to leave ovarian substance at the base of one or both ovaries not larger than an olive seed. These women all began to menstruate at periods varying from two to six months after the operation and with but slight irregularity. There has not been one of them in whom this function has been effaced, and within a year all of them became as regular as the average normal woman.

In one case of caseous destruction of the entire left tube and ovary and of the right tube, and all but the submerged base of the right ovary, from tuberculosis it was possible to save the merest portion of the base of the right ovary. This patient has had irregular, and at times, suppressed menstruation for fifteen years and has also suffered from pulmonary tuberculosis. Before the operation she menstruated irregularly at intervals of from two to four months. After her operation there was no sign of return of the period, except a headache from congestion, for three months. She then flowed slightly for a day and a half, but not until the sixth month was the menstruation fully re-established; even then it was attended by some pain. Now, two and a half years later, menstruation occurs regularly, lasts three days, and gives as little discomfort as is usual in normal women.

In a number of other patients the destruction of the ovary has been less than in this case and the re-establishment of the menstrual function has been relatively earlier and less eventful. In a still larger class of patients one of the ovaries may be almost or quite totally destroyed and the other partially or wholly normal. In such the excision of the diseased tissue leaves no incident of note in the perfectly normal menstrual cycle.

Ovarian grafting in young women who have previously been subjected to ovariotomy is still in the experimental stage. Knauer's experiments on rabbits in 1896 showed that autotransplantation of an excised ovary within the broad ligament resulted in continuance of ovulation. Hetero-transplantation has resulted in degeneration of the ovary thus transferred from one animal to another. In a recent contribution by Robert T. Morris, comprising a résumé of the latest work in this field, including his own, these conclusions are drawn:

1. When the ovaries are removed from an animal and then replaced at some point near their original site or even at distant points, the tendency is for the ovary to continue its function of developing ova and of furnishing its internal secretion. Such transplanted ovaries may continue to do normal work for an indefinite period.

2. When ovaries are removed from one animal and transplanted into another animal of the same kind which has had the ovaries removed, the tendency is for the grafted ovary to undergo a degenerative process. The graft will continue to furnish ova and internal secretion for several months in some cases, but at the end of a year we often find the grafts fatty and apparently useless. We assume that the serum of one animal is destructive to the introduced tissues of another animal of the same sort. My present line of investigation is toward making one series of rabbits immune against the serum of another series and then exchanging the ovaries of the two series. If this can be accomplished, ovarian grafting will be placed on a plane of usefulness much above its present one.

As the possibilities of conservative surgery on the ovary are better understood we shall have fewer subjects requiring transplantation. In fact, it is simply the substitution of a rational artistic technic for a crude and ruthless sacrifice of vital structures.

CONSERVATION OF THE TUBES.

In the uterine tube we have a structure which in both its histologic and anatomic characters becomes at once a more complex problem than the ovary. Partly on account of this involved pathology the ovary has frequently been sacrificed with the diseased tube. This practice has doubtless grown from the fallacy that if the tube be partially or hopelessly destroyed the ovary is likewise in a hopeless condition and should be removed also. No more pernicious doctrine than this could prevail. Each organ must be considered and treated with regard to its own pathology, and the fact that certain organs are anatomically contiguous and may be closely related by blood and lymph currents and nerve supply is by no means just cause for sacrificing both organs when but one is diseased. There are many mild infections outside of the strictly pyogenic, gonorrheal or tuberculous that may cause the lumen of a tube to become obliterated. I have often found the isthmus constricted and the *ostium abdominale* partially closed in young unmarried women, with neither a history nor pathologic evidence that any infection, however mild and innocent, could have occurred. Yet at some time when the uterine mucosa was most susceptible a slight endometritis had extended to the tubal lining and through successive attacks had produced the hyperplasia necessary to cause occlusion.

There is also good reason for the belief that bacteria from the appendix on the right and from the epiploic processes of the sigmoid on the left have been definite factors in the closure of the ampulla at the fimbriated extremity. Whatever the etiology of these milder infections, on account of which the tube ceases to be patulous, we have in this obstruction a cause of sterility as actual and permanent, until relieved surgically, as from a septic or gonorrheal infection. And it should be remembered that fully a third of the patients in private practice presenting themselves for relief from sterility are suffering from the results of these milder infections. The frankly septic and gonorrheal infections very naturally cause the most destructive and complex deformities of the tubes and call for a correspondingly radical treatment. Fortunately for the operator, unfortunately for the fate of the tube, the best practice that is now known to us is to await the subsidence of the acute process before surgical interference is justifiable. Whether we shall ever venture as a rule of practice to treat these abscesses early before extensive destruction of the tube occurs is doubtful.

A better understanding of the means of arresting the infection before it passes in any degree beyond the uterine mucosa is necessary. This gained, the conditions in the tube will be found more amenable to early cleansing and drainage and by so much the early treatment of sub-acute septic and specific infections of the tube will be practicable. Even as it is one is continually surprised to see how remarkably well these extensive infections clear up and leave tubes which seem hopelessly deformed, astonishingly free from evidences of damaging inflammation. It may be necessary to do more than one operation on these structures. It will always be necessary to apply the most discriminating judgment and careful technic in regard to the incision, the matter of drainage and in arriving at a decision as to what portion, if any, may safely be removed. Yet it is most gratifying to find in how many instances the surgeon is well rewarded for the care and pains taken to save his patient these priceless structures.

In tuberculosis—an infection of the tube which we

are identifying far more frequently than heretofore—little as yet can be offered of a conservative character. Theoretically there should be no justification for sacrificing an apparently sound ovary or tube. If one is infected and the other not it would seem to be reasonable practice to leave the sound tube, even though a later infection should occur and a second operation be necessary. This doctrine would be beyond controversy did we actually know that the endometrium and the lining of the sound tube were uninfected. In the light of our present methods, however, we can not know, and hence we must be guided by clinical experience; this has taught us that when one tube becomes manifestly tuberculous infection of the other is almost inevitable and that in this infection the uterus is frequently first. With this pathology we now know but one safe course of action—total extirpation. The future should hold something better than this.

The technic in tubal surgery must depend largely on the character and degree of infection and the extent of destruction and deformity. In simple stricture at the isthmus, resection of the isthmus and the anastomosis of the ampulla with the proximal end of the tube near the cornu, offers good results. A cord of heavy plaited silk should be anchored in the ovary and the other end carried down through the uterine cavity to a gutta percha bobbin in the vagina to insure the mucous tract remaining patulous during the repair of the anastomosis. I have known pregnancy to occur within three months following this procedure.

When the mouth of the tube has closed by a sealing over of the processes of the fimbria the adhesions, which are usually thin and delicate, should be opened up, the cavity of the ampulla carefully syringed out with salt solution and the edges of the released fimbria folded back over the tube like a cuff and tacked there with interrupted stitches of fine catgut.

When the tube is angulated or kinked by fine dense bands these should be snipped and the tube straightened out, and if a stricture persists the dorsum of the tube should be laid open and the lumen given the usual toilet. Attempts to probe the tube are usually so fruitless that such injury as is sure to result should be avoided. Careful syringing with salt solution in a fine syringe is far safer and more effective.

In tubes which have been septic or gonorrheal and in which active cocci no longer exist, or in mild types of hydrosalpinx, the occluded tube should be opened up, cleansed and the cystic portion utilized as an ampulla. If perfectly free from infective material the dorsum of the obliterated portion of the tube may be laid open and a silk cord passed downward as in the case of anastomosis already described. Frequently these tubes will be found patulous just proximal to the barrier of the cyst wall and the incision may cease a line or two beyond it.

When the tubes are large pus sacs it has been customary to remove them and, commonly, the uterus. It remains to be seen if we shall not be able to do better than this by carefully and properly applied drainage in a series of operations. It can not be denied that so far little of merit in this direction has been recorded; yet if we were to quail at a septic tendovaginitis in the hand and wrist, as we do at conserving pus tubes in the pelvis, what a melancholy showing we should have. Possibly a little more patience, a little more plodding, a little more dogged belief in Nature's regenerative power when nicely and intelligently aided, would be rewarded here as elsewhere, in fields more difficult but not more worthy.

What has been said of preserving the tube when impaired by infection will apply with equal force to tubes changed by ectopic pregnancy. A tube should never be sacrificed if it is possible to save it or even a portion of it, for the normal one may suffer soon in like manner and both thus perish.

In every instance of conservative work on the tubes and ovaries the uterine cavity should be thoroughly curetted and cleansed, since it may be necessary to establish and maintain communication for several weeks between the abdominal cavity and vagina through the uterine canal. That this can be done with perfect safety has been repeatedly proved, but the price is strict asepsis, both as to the sterility and toilet of the tubes and after toilet of the vagina.

It will often be found necessary to shorten the uterine round ligaments to correct version and descent, and this should not be overlooked.

The results of value in a certain procedure are the end results. I know of none more positive or beneficent than in this field, provided careful judgment and attention to minute detail is faithfully observed. My hopes will be more than realized if this paper shall serve to revive a just interest in a field by no means worked out and one in which conservatism will be of much benefit to the race.

THE VALUE OF ALCOHOL IN CARBOLIC ACID POISONING.

A CLINICAL AND EXPERIMENTAL STUDY.*

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1. INTRODUCTION.

The use of alcohol as an antidote in carbolic acid poisoning was first brought before the medical profession by Dr. Seneca D. Powell of New York City. At his clinical lectures, from about 1894 on, he was in the habit of demonstrating his theory by such an experiment as washing his hands in pure carbolic acid and then in alcohol, and had even filled his mouth with the pure acid, and by quickly rinsing it with 95 per cent. pure alcohol had experienced no harmful results. From these experiments he made the statement that alcohol is an antidote to carbolic acid, and suggested its being used internally in cases of poisoning. The results of his five years experience were reported to the Medical Society of the County of New York Feb. 27, 1899, and appeared in the reports of this society.[1] He, however, had had no practical experience in poisoning cases and goes no further than to mention a case of which he had heard of a one-month-old infant, who, after swallowing the strong acid, had been given a teaspoonful of whisky, though apparently moribund, and had recovered temporarily. Furthermore, this child, having died eight days later of pneumonia, showed no signs of an eschar in the stomach.

The first mention of alcohol as an antidote from a clinical standpoint is in the report by Donald B. Fraser[2] of a patient who took an ounce of the pure acid in a glass of whisky, and, though unconscious for eight hours,

* From the Medical Service of the Lakeside Hospital and the Pharmacological Laboratory of Western Reserve University.

1. Powell: Medical Record, New York, 1899, vol. lv, p. 372.
2. Fraser Ibid., 1899, vol. xlviii p. 741.

eventually recovered, repeated lavage with water having been resorted to. He then states that alcohol is apparently a true antidote in carbolic acid poisoning. Whether the author was familiar with Powell's work, at that time unpublished, he does not state.

The credit of first using alcohol in poisoning cases seems to be due to Dr. J. Drysdale Buchanan,[3] who used lavage with two quarts of 35 per cent. alcohol for a patient who had taken one ounce of the acid.

Since these early reports there have been a number of isolated cases in the literature from which the most positive conclusions have been drawn. For example, Kelly[4] in 1899, after reporting one successful case, states that "alcohol is undoubtedly the best antidote for all cases of carbolic acid poisoning, and, indeed, is an absolute antidote." Phelps,[5] on the strength of Powell's work, says: "In cases of carbolic acid poisoning, if immediately after the administration of the poison, alcohol was thrown into the stomach the poisonous effects of the carbolic acid would at once be neutralized." Pinkney,[6] after reporting a fatal case, says: "The amount of carbolic acid left in the stomach and intestines when alcohol came in contact with it was rendered harmless, and the general action of the already absorbed poison was checked immediately." Finally, Gross,[7] in discussing the subject, refers to alcohol as a chemical antidote, and says that the reaction forms "a new phenol benzine or aromatic compound having the chemical and therapeutic properties of alcohol."

Two years ago one of us, having been favorably impressed by some of these reports and by good results obtained by the use of alcohol by himself, and other members of the staff of the Johns Hopkins Hospital, in cases of carbolic acid poisoning, introduced the use of alcohol in the emergency room of the Lakeside Hospital. Since that time thirteen patients with carbolic acid poisoning have been admitted to the hospital, for all of whom the alcohol treatment has been used.

2. CLINICAL DATA.

BY T. W. CLARKE.

As all former reports on this treatment have been of single cases, from which, owing to the natural tendency of the profession to report their successful cases only, but slight conclusions can be drawn, it has seemed advisable to report the present series of thirteen cases more or less in full. For permission to use these cases we wish to thank Drs. Hunter Powell, John H. Lowman, Henry E. Upson and Edward F. Cushing, visiting physicians to the Lakeside Hospital.

CASE 1.—Patient admitted at 8 p. m. Dec. 14, 1903, unconscious. Had taken carbolic acid, ℥ss, in whisky. There were two burns on chin. Pupils react, breathing heavily. Pulse was so rapid and weak that it could not be counted. Stomach was washed out with two quarts alcohol, 10 per cent., then milk and eggs, Oi, left in stomach. Strychnin, 1/30 gr., digitalin, 1/30 gr., given hypodermically. At 9 p. m. patient was conscious and very noisy; quieted with sodium bromid and chloral, āā℥i, by rectum, and slept the rest of the night. Temp. 100, pulse 110, at midnight.

December 15: Some pain on swallowing. Nothing to be seen on examination of the throat and mouth. Temp. 99 to 101.5, pulse 80, resp. 20, urine dark.

December 16: Patient allowed up in wheel chair. Still slight soreness on swallowing. Physical examination negative. Temp. normal, pulse 70 to 80, respirations 20 to 26.

December 18: Eats well, no difficulty in swallowing. Scar on chin disappearing. Discharged, well.

CASE 2.—Patient admitted 11 a. m. Jan. 17, 1904, having taken carbolic acid, ℥iss, shortly before, in glass of beer. Patient was unconscious. Pulse arrhythmic, rate 160. No burns on lips, slight erosion on cheeks. Lavage performed with alcohol, 10 per cent. The washing contained carbolic acid and much undigested food. Milk and eggs, Oi, added and left in. Artificial respiration was resorted to several times. Strychnin, 1/20 gr., and digitalin, 1/30 gr., were given twice in quick succession. Temp. 96.4, resp. 58, pulse 160. At 1:30 p. m. the pulse and respiration became most irregular. Strychnin, 1/20 gr., and digitalin, 1/30 gr., steadied both. Hot water bottles were applied and coffee, ℥viii, given *per rectum*. At 3 p. m. subcutaneous infusion of normal saline, 600 c.c., was given and repeated at 7 p. m., the last containing 7 gm. sodium sulphate. Patient vomited frequently between 4 and 5:45. Patient first showed consciousness at 7 p. m. while the infusion was being given.

January 18: Patient is doing well. Temp. 100.5 to 101, pulse 100 to 110, resp. 30 to 40. The patient looks well and seems but little the worse for her experience. Urine black, slight trace of albumin, no blood, no casts.

January 19: Last night the patient's temperature rapidly rose, and this morning was 105, resp. 70 and pulse 160. Leucocytes, 5,900. The patient is very cyanotic. Sponge baths, strychnin and oxygen ordered. Examination of chest is negative. Urine yellow, heavy trace of albumin, no blood, no casts.

January 20: The temperature has remained in the neighborhood of 105, pulse 150 to 170, resp. 60 to 65. To-day there is a definite pneumonia area over right upper lobe. Over the entire chest there are patches of tubular breathing and large mucous râles. Patient died at 10:30 a. m.

Autopsy showed an aspiration bronchopneumonia and a small, irregular, dark-colored patch in the fundus of the stomach.

CASE 3.—Patient admitted March 4, 1904, 9 p. m. Walked in, said he had drunk three glasses of whisky and then carbolic acid (doubtful quantity). Was quite conscious and rational. On left side of mouth and lower jaw were acid burns. Inside of mouth and pharynx slightly burned. Respirations normal, 28; pulse good, 100 a minute; temperature normal. Stomach was washed with 10 per cent. alcohol, and water, and sent to ward. He showed practically no constitutional symptoms; slept all night after 1:30; pulse 98 to 104, but of good quality. The next day the inside of patient's mouth was blistered. Dicharged, cured.

CASE 4.—Patient admitted May 9, 1904, 12:10 a. m. Brought in in ambulance in a delirious condition. Had been drinking and had then taken carbolic acid, ℥i. Pulse fairly good quality, 100 per minute. Some burns about the lips. The stomach tube was passed and food particles removed, smelling strongly of phenol. Lavage with 10 per cent. alcohol solution and followed with water. Milk, Oi, and 4 eggs inserted and left in stomach. Patient was given sodium bromid, 25 gr., and slept until morning. Temp. 96.6, pulse 100, resp. 24. The urine the next morning was black, contained a faint trace of albumin and a few hyalin casts, sp. gr. 1038. The next morning patient appeared well; slight eschar on lips; nothing to be seen in throat; some epigastric tenderness. Patient was kept in the ward until May 15 and then discharged, well.

CASE 5.—Patient admitted 5:20 p. m. July 22, 1904. She had been drinking for five days, and at 5 p. m. of the day of admission drank 10 cents' worth of carbolic acid (℥i), with suicidal intent. She was taken into a saloon and became unconscious. On admission she was unconscious, cyanotic, breathing heavily, a great deal of mucus protruding from the mouth, vomiting a little. Pulse rapid and small. The face, mouth and pharynx were badly burned. Temp. 98, pulse 120, resp. 30. The stomach contents showed carbolic acid. Lavage with 10 per cent. alcohol, followed by water, and milk and eggs left in place. She was unconscious after reaching the ward, but regained consciousness at 8:20 p. m. Patient dozed

3. Buchanan: Ibid., 1899, vol. lvi, p. 241.
4. Kelly: Merck's Archives, 1899, p. 441.
5. Phelps: New York Med. Jour., 1899, vol. lxix, p. 62.
6. Pinkney: Amer. Med., 1901, vol. i, p. 358.
7. Gross: Fort Wayne Med. Jour. Mag., 1899, p. 73

all night, waking several times to vomit mucus. The temperature remained elevated for several days, 100 to 101 July 23, 99.5 to 100.5 July 24, 99 to 100 July 25, 26 and 27. The pulse remained at 120 until noon July 23 and then gradually came down to 100 that night, and was 80 on July 26. The respirations from 20 to 30 the first day, 20 after that. The urine was never obtained black, but contained a heavy trace of albumin and many hyalin and granular casts. The leucocyte count the day of admission was 18,400, reds 4,226,000, and hemoglobin 95 per cent. Patient discharged on July 27. The scars on her face were very sore and showed some signs of sloughing. Temperature was 99.

CASE 6.—Patient admitted 2:30 a. m. July 26, 1904. Had taken one ounce of carbolic acid in a glass of whisky. Became unconscious in five minutes, and was sent immediately to the hospital. On admission was unconscious, no sign of burns about mouth or lips; breathing stertorously; pupils small; pulse small, 120 a minute; no vomiting. Lavage with alcohol, 10 per cent., followed with water; after washing, milk and eggs and sodium sulphate, ℥ii, were put in through tube. Patient became conscious at 5 a. m. Recovery was uneventful. The urine was dark-brown, acid, sp. gr. 1014, and contained a few hyalin and granular casts. On admission temperature was 97 and rose to 100.2 at 8 a. m., then gradually came down to 99 July 28. Pulse on admission was 118, at night 100, and 70 on the night of July 27. Respirations 32 on admission, at noon 14, and after this 18 to 20. The leucocyte count the morning of admission was 19,500. Patient did well and was discharged July 28, well.

CASE 7.—Patient admitted 8:30 a. m. Sept. 14, 1904. Had taken carbolic acid, ℥i. She was unconscious, tongue and lips slightly burned, very weak, cyanosed, breathing stertorously, pupils much contracted. Pulse barely perceptible, quite irregular, 140 a minute. Stomach tube passed and contents showed carbolic acid. Lavage with alcohol, 10 per cent., and then water, eggs, milk and sodium sulphate, ℥i, by tube. Strychnin, 1/30, and digitalin, 1/30, given twice within an hour. Intravenous injection of soda sulphate, 2 per cent., 250 c.c. Patient became conscious in two hours. In the afternoon had severe vomiting spell, which was relieved by dilute hydrocyanic acid, 4 minims, and bismuth subnitrate, 10 gr. On admission temperature was 99, pulse 112 and resp. 30. Temperature went up to 100 that night, and then down to normal the following evening. The pulse remained at 110 for 24 hours, and then dropped to 80 and remained in that neighborhood, with occasional flare-ups. Respiration came down gradually from 30 to 20 in 3 days. The urine was pale, sp. gr. 1020, faint trace of albumin, and a very few hyalin casts. Patient suffered considerably from soreness of the mouth and had very little pain in the stomach. No vomiting after the first day. Discharged, well, Sept. 19.

CASE 8.—Patient admitted Feb. 28, 1905. Child, aged 19 months, swallowed an unknown quantity of 95 per cent. carbolic acid three hours before admission. Seen by a physician at the home five minutes later, who washed stomach with alcohol and water. Patient was unconscious when seen at that time. On admission was very drowsy, temperature 101.5, pulse 160. Tongue, pharynx and inside of cheeks very badly burned, white in color. On admission patient was given magnesium sulphate, ℥ii, and strychnin, gr. 1/250. March 1, temp. 104, pulse 152, resp. 40. March 2, temp. 100, pulse 100, resp. 20. From then on the temperature varied from normal to 100, pulse from 100 to 150, and respirations from 25 to 30. The child did well, and on March 6, the mouth having healed, patient was discharged.

CASE 9.—Patient admitted on March 23, 1905. The history was that she apparently fainted in an elevator, and poisoning was not suspected for one and a half hours. On admission she was moribund, unconscious, cyanotic, resp. 36, pulse small and weak, 160, pupils dilated, faint trace of carbolic to breath, mucous membranes, gums and palate white. Patient was stimulated with strychnin, 1/20 gr., digitalin, 1/30 gr., and stomach washed with alcohol, 10 per cent., and eggs and milk and magnesium sulphate, ℥iii, left in the stomach, 500 c.c. Soda sulphate, 2 per cent. solution, given intravenously. Patient never rallied and died half an hour after reaching the ward.

CASE 10.—Patient admitted May 5, 1905, in an unconscious condition. Had taken carbolic acid, time not known. Severe burns of the cheek, corner of mouth, lips, tongue and roof of mouth. Pulse weak and rapid. Stimulated with strychnin and digitalin. Stomach washed with 10 per cent. alcohol and water. Eggs and milk, magnesium sulphate, ℥i, and sodium sulphate, ℥ss, inserted through tube. Temp. 100, pulse 110, resp. 20. Patient was restless after getting to ward, but later slept. Temperature during the day rose to 100.8 and pulse 120, but on the second day temperature became normal and pulse 80. The leucocytes on May 5 were 28,200. Patient had difficulty in swallowing and considerable epigastric tenderness.

On May 7 patient felt well except for the burns on the face, and insisted on going home.

CASE 11.—Patient admitted, unconscious, 9:30 p. m. June 1, 1905. Had taken carbolic acid, ℥ii, a few minutes before. Two scars, 4 cm. long, on upper lip; slightly cyanotic; pulse good. Lavage, 10 per cent. alcohol, then magnesium sulphate and eggs and milk by stomach tube. No stimulation. Consciousness returned 10:30 p. m. Next day scars marked on lip and slight on roof of mouth and tongue. Large white patch on right tonsil and posterior wall of pharynx. Larynx inflamed, abdomen rigid and sensitive in upper half. Blood examination: Leucocytes, 11,800; hemoglobin, 83 per cent.; fresh blood normal. Urine greenish, sp. gr. 1020, acid, loaded with hyalin, granular and leucocyte casts. June 4 and 5: Urine, sp. gr. 1015, neutral, no casts. June 5: Discharged, well.

CASE 12.—Patient admitted 3:30 p. m. Sept. 7, 1905. Had taken carbolic acid, ℥i diluted with a little water, fifteen minutes before. She had not swallowed all, as the glass was knocked from her hand after two swallows.

Patient was comatose, cyanotic. Pupils at first dilated and then pinpoint. Pulse very weak. There were two scars on the lips and the entire mouth and tongue was whitened, on the chest and abdomen was very extensive burn, extending from the neck to the pubes. The treatment consisted of lavage with 10 per cent. alcohol and the introduction of yolk of eggs and sodium sulphate ℥ii. Strychnin 1/20 gr. and digitalin 1/20 gr. were given hypodermically. The patient regained consciousness in two hours and was quite violent for a short time, then quieting down. The next day the urine was of the characteristic brown-black color sp. gr. 1005, for three days contained a few hyaline and granular casts; after this it was normal. The temperature remained slightly elevated for five days, 99 to 101.5. For two days there was some pain in the mouth, especially on swallowing. By the fifth day the mouth had cleared up, but the skin burn was still very sore, red and blistered. The patient was discharged well on the ninth day.

CASE 13.—Patient admitted 8 a. m. Sept. 14, 1905. Had taken carbolic acid ℥i in water fifteen minutes before admission. Semi-conscious, cyanotic on admission. Burns on lips and togue. Lavage with alcohol 10 per cent. Magnesia sulphate ℥ii, two eggs and milk by tube. Strychnin 1/20 gr., digitalin 1/25 gr. hypodermically. Temperature 100, pulse 98; next day pulse and temperature normal. Discharged well September 16.

An analysis of the preceding cases shows several interesting features. The local effect on the mouth is greater if the acid is taken pure or in water than if taken in alcohol, all ten cases of the first class showing local eschars, whereas two of the three of the latter class showed no burns whatever. All the cases were unconscious on admission, except two who had taken the drug after drinking whisky and one who had taken it in water. This includes the cases which had taken the poison in whisky and beer. The longest period of unconsciousness occurred in the patient who had taken the acid in beer. The average period of unconsciousness of the cases having taken the drug in alcohol was three and three-quarters hours and of those in which no such history was obtained was one and three-quarters hours.

The mortality record was low, only two of the thirteen cases having died, one of these from bronchopneumonia a few days afterward, probably due to an inhalation of material during the lavage, which was performed with difficulty, and the other having been admitted moribund after having been kept for two hours outside without treatment. The treatment in all the cases consisted in a most thorough lavage with 10 per cent. alcohol and in the later few cases this was followed by lavage with plain water. In eleven of the cases milk and eggs were introduced through the tube and left in the stomach. Sodium sulphate was administered through the tube in three cases and intravenously in three cases and magnesium sulphate in the stomach in four cases. Stimulation with strychnin and digitalin was resorted to in eight cases.

CASES TREATED WITHOUT ALCOHOL.

A study of the records of the fourteen cases of carbolic acid poisoning treated at the Lakeside Hospital previous to the introduction of the use of alcohol in treatment surprised the authors by their similarity to their own results. In this series of fourteen, all of which were treated by thorough lavage, either with plain water or a solution of magnesium sulphate, there were only three deaths, two of these due to pneumonia and the third a case admitted ten hours after taking two ounces of the acid, an emetic of magnesium sulphate having been resorted to, but no lavage performed. In this early series also the cases which had taken the poison in alcoholic beverages seemed to show a greater tendency to unconsciousness than those that had taken it pure or in water. In the ten cases in which the record was made as to the manner in which it was taken, five took it with alcohol and five either pure or in water. Of the five alcoholic cases four were unconscious and one semi-conscious, while of the five that had not used alcohol two were unconscious, one semi-conscious and two conscious.

CASES COLLECTED FROM THE LITERATURE.

The following cases have been collected from literature, and though many of the reports are too meager for any conclusions to be drawn from them, they are inserted that the reader may see the various ways in which alcohol has been used in carbolic acid poisoning in recent years. It will be noticed that they are all of isolated cases.

In these cases the following abbreviations will be used:

S. and A. Sex and age.
P. Amount of poison and how administered.
T. Time elapsed before treatment.
L. Local eschars.
Sy. Symptoms.
Tr. Treatment.
C. Time elapsed before consciousness returned.
A. After history.
R. Results.

CASE 1.—Fraser,[2] 1895. S. female. R. phenol, ℥i, in whisky. T. 15 min. L. none. Sy. coma. Tr. atropin hypo. lavage. C. 8 hours. A. vomited 24 hours. R. well.

CASE 2.—Buchanan,[3] 1899. S. and A. female, 35. P. phenol, ℥i. T. short. Tr. sodium sulphate hypodermic, lavage with 2 quarts of 35 per cent. alcohol. R. well.

CASE 3.—Adams,[8] 1899. S. and A. female, 36. Tr. alcohol 1 pint, by mouth; alcohol, ℥iv, and whisky, ℥iv, q. 15 min. Six doses whisky, ℥ii q. h. 8 doses. R. well.

CASE 4.—Kelly, 1899. A. 21 months. P. phenol, ℥i. T. 6 min. Tr. olive oil. Alcohol, ℥vi. Apomorphin, 1/30 gr. Whisky, ℥i, q. 10 min. Eight doses. C. 30 min. R. well.

CASE 5.—Klein,[9] 1900. S. and A. female, 29. P. phenol, ℥ii. Tr. alcohol, ℥iv, by mouth q. ½ hours, 4 doses, then ℥i q. 1 hour, 4 doses. Morphia, ¼ gr. R. well.

CASE 6.—Rodman,[10] 1900. S. and A. female, 60. P. phenol, ℥ii, pure. T. short. L. lips and tongue. Sy. coma, cyanosis, subnormal temperature. Tr. alcohol, ℥iv, into pharynx, then lavage with warm water and then with dilute alcohol. A. temperature for 2 days, 101 to 102. R. well.

CASE 7.—Pinkney,[9] 1901. S. and A. female, 3½ years. P. phenol, ℥iv. T. ½ hour. L. lips and chin. Sy. coma, cyanosis, thready pulse. Tr. alcohol, ℥iiiss. Strychnin, hypodermic, 1/30 gr. Infusion normal saline, 1 pint. C. 7 hours. A. temperature rose rapidly to 106. R. death in 12 hours.

CASE 8.—Gries,[11] 1901. S. and A. female, 3. Sy. coma, weak pulse, cyanosis, appeared moribund. Tr. Hypodermic of ether. Magnesium sulphate, 1½ quarts, by stomach tube, then lavage with 20 per cent. whisky and ℥iv left in. Atropin, 1/200 gr. Strychnin, 1/40 gr., hypodermic. C. few hours. R. well.

CASE 9.—McDonald,[12] 1902. P. phenol, ℥i. T. 25 min. Sy. collapse, coma. Tr. stomach tube, alcohol, 0i left in a few minutes and siphoned off. This repeated once. Then lavage with water, whisky, ℥iv, nitroglycerin, 1/100 gr., strychnin, 1/20. C. six hours. R. well.

CASE 10.—King,[13] 1902. S. and A. female, 33. P. phenol, ℥ss. 3 min. Tr. alcohol, 0ss. Then lavage with water, repeated. Alcohol, ℥iii, left in. C. 4 hours. R. well.

CASE 11.—Marshall,[14] 1903. S. and A. male, 74. P. phenol, ℥i, and olive oil, ℥iv, per rectum. T. immediate. Sy. coma, pulseless. Tr. irrigation with 2 quarts of water 1 hour and 10 minutes. Alcohol and water, āā℥iv, repeated and irrigated. C. 8 hours. R. well.

CASE 12.—Atwell,[15] 1903. S. and A. female, 35. P. phenol, ℥ss, in water. T. 20 min. Sy. coma, cyanosis, weak pulse. Tr. atropin, 1/50 gr., hypodermic. Dilute alcohol, ℥vi. Lavage with water, gallon 1. Alcohol, 95 per cent., ℥vi. Lavage in 5 minutes. Magnesium sulphate, ℥i, in water 0i. Stimulation. Infusion normal saline. R. well.

These two facts shown by a study of our own cases, namely, the immaterial difference in the mortality, whether the stomach was washed with alcohol or with some other liquid, and the apparently greater constitutional symptoms when the drug was taken with alcohol then when taken clear or in water, seemed to throw such grave doubts on the antidotal power of alcohol to carbolic acid when taken internally, and these doubts agreeing so well with the opinions expressel in the recent textbooks on toxicology, the authors determined before publication to undertake some experimental work in the effort to prove or disprove the antidotal action.

3. EXPERIMENTAL DATA.

BY DRS. BROWN AND CLARKE.

Acting under the direction of Dr. Torald Sollmann, a series of animal experiments were carried on in the pharmacological laboratory of the Western Reserve University, the results of which are herewith published.

INTRODUCTION.

Some experimental investigations of the subject have been undertaken by others, but these are rather unsatisfactory; the number of animals used by each investigator seems rather too limited to make the conclusions binding.

In 1901 Thornton[16] made some experiments on a series of five dogs, giving by stomach from one to four

8. Adams: N. Y. Med. Jour., 1899, vol. lxx, p. 780.
9. Klein: Jour. Am. Med. Assoc., 1900, xxxv, p. 1557.
10. Rodman: Med. Record, N. Y., 1900, vol. lviii, p. 70.
11. Gries: Therapeutic Gazette (Detroit), 1901, vol. xxv, p. 587.
12. McDonald: Fort Wayne Med. Jour. Mag., 1902, xxii, p. 59.
13. King: New Orleans Med. and Surg. Jour., 1902, vol. liv, p. 740.
14. Marshall: Med. Record N. Y., 1903, vol. lxiii, p. 174.
15. Atwell: Virginia Med. Semi-Monthly (Richmond), 1903, vol. viii, p. 73.
16. Thornton: Progressive Med., Dec. 1901, p. 343.

drams of phenol, undiluted, or with alcohol or oil. This was left in the stomach, together with the antidote. He gave to one animal phenol mixed with 95 per cent. alcohol, and after the onset of toxic symptoms administered more alcohol. The result was death in four hours, with no signs of improvement. Another animal was given phenol mixed with oil, which gave practically the same result. In the remaining animals phenol was administered and, after the poison symptoms had become manifest, alcohol in single or repeated doses was given without any beneficial effect.

The following year Wallace[17] made observations on two rabbits and two cats. The first rabbit was given the lethal dose (0.6 gm. per kilo) subcutaneously, resulting in death in one hour and ten minutes. The second rabbit was given 5 cc. of 60 per cent. alcohol subcutaneously and this followed five minutes later by the same dose of phenol as was given the other rabbit. The toxic symptoms appear after the same interval of time as in the first rabbit. Five cc. doses of the diluted alcohol were injected at intervals, without improvement of the condition. The animal died in one and one-fourth hours.

The cats were given the lethal dose by stomach, one receiving the aqueous solution and the other receiving the phenol in 60 per cent. alcohol. Alcohol was later injected subcutaneously, but without effect. Both animals died after nine hours.

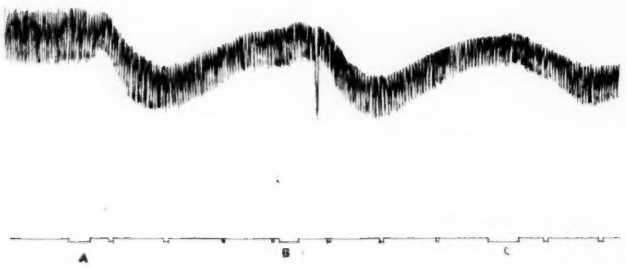

Fig. 1.—Intravenous injections of 1 c.c. per kilo of 1 per cent. phenol in normal saline at A, B and C. Time marks 15 seconds.

Method of Investigation.—Our experiments may be divided into three groups:

1. Systemic antagonism (intravenous injection).
2. Antagonism in the stomach (5 per cent. phenol).
3. Efficiency of lavage (undiluted phenol).

I. SYSTEMIC ANTAGONISM.

For the purpose of determining whether alcohol can lessen or abolish the systemic effects of phenol, a 1 per cent. solution was injected intravenously into dogs, the dose of 1 c.c. per kilogram (0.01 gm. of phenol) being repeated every minute. Three solutions of phenol were employed—one in normal saline solution, the second in 10 per cent. alcohol, and the third in 20 per cent alcohol, the results produced by these solutions being compared.

Operative Methods.—All dogs used in these experiments were first given sufficient morphin to render them quiet and then kept under complete ether anesthesia during the course of the experiment. Before coming out of the anesthetic condition they were killed.

A cannula was placed in the trachea, through which the anesthetic (ether) was afterward given, and a cannula in the carotid for blood pressure tracings. The intravenous injections were made through a cannula placed in the femoral vein and connected with a graduated burette which contained the injection solutions.

17. Wallace: N. Y. University Bul. of the Med. Sci., 1902, vol. II, p. 58.

(*A*) *Effects of Phenol in Normal Saline.* These will be described first for the purpose of comparison.

Blood pressure, and in some cases respiratory tracings, were taken. In all the animals the intravenous injection causes a *fall of blood pressure* which has a tendency toward recovery, depending on the quantity injected (Fig. 1.) Th. Gies[18] obtained the same results in his experiment with animals. The average fall is from 20 to 30 mm. of mercury. The fall begins almost immediately after the injection; reaches the minimum in thirty seconds and returns to about normal after sixty seconds. Each successive injection becomes less effective, with a tendency toward a slow gradual fall of blood pressure. Where the lethal dose is injected there is a rapid fall which terminates by stoppage of the heart (Fig. 2.).

Respiration is but little affected except by the mechanical interference of the convulsive movements.

Onset of Convulsive Movements.—In all the animals employed the intravenous injection causes a gradual onset of convulsive movements beginning with a tremor of the legs and jaw, which gradually increases until the contractions acquire a clonic convulsive character. The absence of a rise of blood pressure which is usually associated with convulsions is probably due to the deep anesthesia and to the rather mild type of the convulsions.

(*B*) *Effects of Alcoholic Solutions of Phenol.*—

Fig. 2.—Death from intravenous injection of phenol. Injection made at A.

These do not differ from those of the saline solution of phenol in either quality or quantity. This is shown by Table 1.

TABLE 1.—INTRAVENOUS INJECTION. (DOG).

Dog. No.	Solvent.	Fall of Blood Pr. after first injection.	Twitching movements after c.c. per kilo.
1	Normal saline...	30 mm.	5 c.c.
4	Normal saline...	40 mm.	5 c.c.
2	10 p. c. alcohol..	24 mm.	3 c.c.
3	20 p. c. alcohol..	40 mm.	5 c.c.

II. ANTAGONISM IN THE STOMACH.

To determine the possibility of an antagonism in the stomach, the phenol was administered by stomach tube to rabbits. The just fatal dose (0.6 gm. per kilo.) was given, as a 5 per cent. solution in water, and in 10 per cent. alcohol and in 10 per cent. glycerin. These animals were not anesthetized.

(*A*) *Effects of the Watery Solution.*—The first symptoms start in one to three minutes and consist in a general trembling of the body and legs. The legs grow weaker and the animal falls on its side. Convulsive movements of a clonic type then appear, varying somewhat in intensity; the legs may become extended and rigid, while in some cases the head is thrown backward. Death occurs in from twenty-six minutes to six days.

The alcoholic and glycerin solutions produced the same effect quantitatively and qualitatively. This is shown in Tables 2 and 3.

18. Gies: The Archiv. für Exp. Path. and Pharm., 1880, vol. xii p. 401.

TABLE 2.—DETAILS OF STOMACH EXPERIMENTS ON RABBITS.

Rabbit No.	Weight in Gms.	Amount of Phenol Given (always 0.6 gm. per kilo).	Diluent used.	Time Elapsed Before Appearance of Convulsive Movements.	Final Result.
1	920	11	Water.	1 m. 45 sec.	Died after 28 min.
7	770	..	Water.	....	Tube passed into trachea.
8	490	5.5	Water.	1 m. 30 sec.	Died after 25 min.
9	980	11.7	Water.	1 m. 30 sec.	Died after 6 days.
10	770	9.2	Water.	2 m. 10 sec.	Died after 8 hrs.
3	870	10.4	10 p. c. alc.	1 m. 50 sec.	Died after 24 hrs.
5	920	11	10 p. c. alc.	6 m. 30 sec.	Died after 3 days.
12	730	8.7	10 p. c. alc.	3 m. 15 sec.	Died after 18 min.
13	670	8	10 p. c. alc.	2 m. 30 sec.	Died after 2½ hrs
*2	830	10	10 p. c. glyc.	1 m. 40 sec.	Died after 3½ m.
4	1450	17.5	10 p. c. glyc.	2 m. 45 sec.	Survived.
6	1200	14.4	10 p. c. glyc.	3 m. 30 sec.	Survived.
11	780	9.3	10 p. c. glyc.	2 m. 10 sec.	Died after 2 days.

* It was thought some of the solution was aspirated into the trachea in this animal.

TABLE NO. 3.

TIME OF DEATH IN STOMACH EXPERIMENTS. (Rabbits.)

Phenol dissolved in			
Water	25 minutes	28 minutes	8 hours . . . . . 6 days
Alcohol	18 minutes	2½ hours	24 hours . . . . . 3 days
Glycerin	3½ minutes	2 days	Survived . . . . Survived.

Microscopical Examination of the Stomachs.—This was undertaken by Dr. W. W. Williams in rabbits 1, 2, 3, 8 and 12. The findings may be arranged, according to the severity of the lesions, as follows:

Rabbit No.	Lesion.	Medium in Which Phenol was Administered.	Time Elapsing Before Death.
1	None	Water	28 minutes
8	Very slight	Water	25 minutes.
2	Fairly marked	Glycerin	3½ minutes.
3	Very severe	Alcohol	24 hours.
12	Very severe chronic gastritis (probably not due to the drug).	Alcohol	18 minutes.

It is seen that the local lesions are quite as severe with the glycerin or alcoholic solution as they are with the watery solution.

From these results it is evident that the alcoholic solution is no less toxic than the aqueous solution; while the glycerin solution appears to be rather less fatal than the others, since two of the animals recovered completely. This might be due to slower absorption; for we are loathe to attribute it to any antidotal properties, either chemical or physiologic.

III. EFFICIENCY OF LAVAGE.

To determine the effect of lavage after the administration of concentrated phenol, and the relative value of water and diluted alcohol for this purpose, we employed dogs, anesthetized with morphin and ether, and connected for blood-pressure tracings. A stomach-tube was inserted and the stomach washed with water until the washings returned clear. One c.c. per kilo. of 95 per cent. phenol was then introduced through the tube and allowed to remain for ten minutes, when lavage was started, either with water or with 10 per cent. alcohol.

(*A*) *Effects of Concentrated Phenol by Stomach Without Lavage.*—This was tested on one animal. This showed an immediate fall of blood pressure amounting to 40 mm. of mercury. The pressure remains about constant after this primary fall, with a tendency toward a slight gradual fall, which continues until death. At no time during the experiment was there any evidence of improvement in the condition.

(*B*) *Lavage.*—In those animals in which lavage is employed, the blood pressure begins to rise after an interval of time which varies with different animals. The convulsive movements cease and the animals show all signs of recovery, the condition being judged by the blood pressure and convulsive movements.

The results are shown in Figure 3. They are identical for all the experiments, whether water or alcohol was used for lavage.

The details of the experiments are shown in Table 4.

4. *THE LOCAL ANTAGONISM OF CARBOLIC ACID AND ALCOHOL, AND OTHER PHENOL—SOLVENTS.*[19]

It will be recalled that the employment of alcohol in phenol poisoning was originally based on the local antagonism of the two drugs. This antagonism, as is well known, can be easily demonstrated, by dipping the finger in carbolic acid and then washing it at once with strong alcohol. To secure a complete removal of the phenol effects, however, it is essential that the application of the phenol should be of short duration, and followed very quickly by the alcohol. This is illustrated by the experiments of Wallace.[17] For instance, when the alcohol was used immediately, it removed all the effects completely; when it was used after ten minutes it removed the superficial whitening of the skin, but not the deep effects. When it was used after thirty minutes it had almost no effect. The addition of a small quantity of alcohol to the phenol increases its local effects—an observation which effectually refutes the theory that alcohol and carbolic acid enter into an innocuous chemical combination. The increased effect is to be explained by a more rapid absorption of the slightly diluted acid.

Wallace attributes the antagonism to the solvent action of alcohol on the phenol which would remove it much more readily from the superficial layers of the skin than would water. If the theory be correct, other phenol solvents must produce the same effect as alcohol. Wallace tested this with chloroform, ether and benzol, with positive results.

TABLE NO. 4.

EXPERIMENTS ON STOMACH OF DOGS.

Dog Number.	Weight. (Kilo.)	Solvent Used.	Time in Stomach.	Initial Bl'd Pressure.	Blood Pressure 10 m. After Giving.	Blood Pressure Remains at Low Level.	Blood Pressure at End of Experiment.	Convulsions Ceased.	Duration of Experiment.	Result.	Remarks.
10	14.	(Control)		103	72	Until death..	....	At death..	2 hrs., 45m.	Died.....	Died.
5	4	Water...	10m	102	37	1 hr., 27 m...	102	2 hours....	4 hrs., 12m.	Recovered.	Animal killed.
9	3.6	Water...	9m	105	43	30 minutes...	96	1 hr., 20m..	2 hours....	"	Died from ether.
6	8	Alcohol..	10m	98	60	34 minutes...	60	1 hr., 40m..	4 hrs., 25m.	"	Animal killed.
8	6	Alcohol..	10m	101	30	15 minutes...	100	3 hrs., 10m.	4 hrs., 29m.	"	Died from ether.
7	.3	Alcohol..	10m	89	30	Until death.	20	At death..	46 minutes.	Died.....	Tube did not enter stomach in washing.

19. This chapter was kindly furnished by Prof. T. Sollmann, by whom the experiments were performed.

We made the following experiments, using somewhat different solvents:[20]

EXPERIMENT 1.—(*a*) The finger tips are plunged for thirty seconds into liquefied (95 per cent.) phenol, then for five minutes into the solvents. At the end of this time the finger in water is blanched, the fingers in 50 per cent. alcohol, 50 per cent. glycerin, ether and cottonseed oil appear normal. (*b*) The fingers are again dipped in the carbolic acid for one minute, then for one minute in the solvents.

The blanching is very conspicuous in water; then follows the 50 per cent. glycerin, then the 50 per cent. alcohol and ether.

The sensory effects are greatest in water, ether and 50 per cent. alcohol; less in 50 per cent. glycerin and oil.

EXPERIMENT 2.—The fingers are dipped into liquid carbolic acid for one and one-half minutes, then into solvents and observed at end of (*a*) one minute, (*b*) two and three minutes.

(*a*) One minute in solvents: The blanching is by far the most conspicuous in water; then follows the 25 per cent. glycerin and 25 per cent. alcohol. Turpentine and cottonseed oil appear normal. Burning is felt in the water, and in the glycerin and alcohol solutions, not in turpentine and oil. The water finger also shows the greatest anesthesia.

(*b*) Two or three minutes in solvents: The blanching is most pronounced in the water; then follows 25 per cent. glycerin, then 25 per cent. alcohol. None is seen in turpentine and oil.

(*c*) The finger which had been put in water and which was still very much whitened, is rinsed in 95 per cent. alcohol. The blanching disappears almost completely at once.

(*d*) On the following day the skin of the fingers is rough and broken, and this condition persists for several days. It is alike in all the fingers.

It may be concluded that all phenol solvents arrest the local action of the phenol, i. e., the blanching action. This and the observation that dilution of the alcohol greatly impairs its efficiency sufficiently show that the effect is mainly due to solution and is not chemical. The solvents also tend to lessen the burning sensation, probably by removal of the phenol. They appear to be quite unable to prevent the late effects of the phenol, which may be attributed to the phenol which had already penetrated deeply when the solvent was applied.

It appeared interesting to determine also whether these solvents exert any effect when the carbolic acid is left in contact with the skin. For this purpose 5 per cent. solutions of phenol were made in various solvents. These were arranged in five small beakers, so that all the fingers of the left hand could be inserted and withdrawn simultaneously. The degree of blanching, tingling and anesthesia was compared after five minutes. The tingling sensation proved to be too irregular to be of any value for comparison. As in the previous series, the nature of the solvents were unknown to the experimenter and compiler until the conclusions had been drawn.

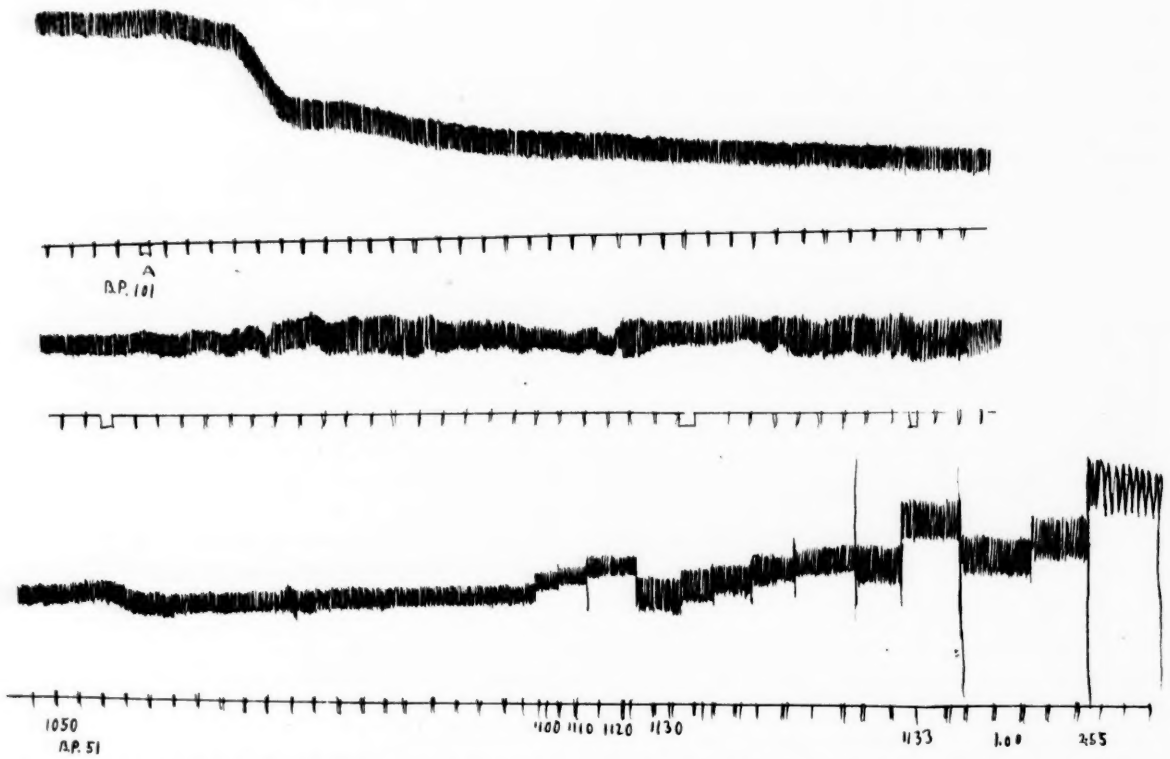

Fig. 3.—One c.c. per kilo of 95 per cent. phenol introduced into the stomach at A, time 10:25. Began lavage at B, time, 10:35, finished lavage at C. Blood pressure at end of experiment 100, time, 2:55. Base line corresponds to 0 pressure.

EXPERIMENT 3.—Comparison of 5 per cent. phenol in water (W), 10 per cent. alcohol (A), 10 per cent. glycerin (G), and cottonseed oil (O).

Experiments on two persons gave identical results:

The anesthesia was most conspicuous in W; somewhat less in A, absent in G and O.

The blanching was marked and about equal in W and A, almost absent in G, quite absent in O.

EXPERIMENT 4.—Comparison of 5 per cent. phenol in water, 25 per cent. alcohol, 25 per cent. glycerin, turpentine and cottonseed oil. The experiment was repeated on nine persons, with the following results:

Anesthesia.	Most Marked.	Less Marked.	Absent.
Water	cases	1 case	1 case.
Alcohol	2 cases	3 cases.	4 cases.
Glycerin	None	1 case	8 cases.
Turpentine & Oil.	None	None	9 cases.

20. In all the experiments the subject was not aware of the nature of the solvent, the containers being numbered and the results tabulated by these numbers.

BLANCHING

	Most Marked.	Second Place.	Third Place.	Fourth Place.	Absent.
Water	9 cases	None	None	None	None.
Alcohol	None	5 cases.	2 cases.	None	2 cases.
Glycerin	None	3 cases.	3 cases.	None	3 cases.
Turpentine	None	None	2 cases.	3 cases.	4 cases.
Oil	None	None	None	None	9 cases.

TINGLING.

	Most Marked.	Second Place.	Third Place.	Absent.
Water	1 case	None	None	8 cases
Alcohol	3 cases	None	None	6 cases
Glycerin		1 case	None	8 cases
Turpentine		None	None	9 cases
Oil	1 case.	None	1 case	7 cases

These results show that the addition of all the solvents diminishes the local effects of phenol. The effect on the tingling sensation is, however, irregular. This may be attributed to the difficulty of exact observation. The effect is more pronounced on the superficial action (blanching) than on the deeper actions (anesthesia). Oil alone prevents both actions in all cases. Then come, in order of efficiency, turpentine, 25 per cent. glycerin, and 25 per cent. alcohol. Glycerin is more effective, for the same degree of dilution, than is alcohol.

In this experimental arrangement the effect of the solvents can not be explained, as in the previous series, by removal of the phenol. Nevertheless, it seems to be connected with their solvent power. It may be explained in the following manner: If a substance is introduced into a mixture of two immiscible solvents, a and b, it will be distributed between these two solvents in a ratio proportional to its solubility in a and b. If it is more soluble in a, this will contain a greater amount. This may be demonstrated by shaking a 1 per cent. solution with an equal volume of olive oil in one test tube, and with an equal volume of petroleum benzin in another. If a little ferric chlorid solution is added to both test tubes, the watery layer will not be colored in the oil tube (the phenol having passed into the better solvent), while it will be colored a deep violet in the benzin tube. The benzin being a poor solvent, almost all of the phenol has remained in the water.

In our experiment, the fluids of the tissues constitute one solvent, the fluid in which the carbolic acid is applied the other. The better the solvent power of our solvent, the less of the carbolic acid will pass into the tissues.

In the case of alcohol, and to a lesser extent with glycerin solutions, some of the solvent is doubtless absorbed into the tissues, which explains the relative inferiority of these to turpentine, and especially to oil, which are absorbed much more slowly.

These experiments contradict the rather prevalent opinion that the absorption of phenol is quickened by alcohol and perhaps also by glycerin. As far as we know, this opinion is purely theoretical. It may be true as far as the addition of small quantities of these substances are concerned, which would then act, not so much as solvents, but by increasing the fluidity of the phenol—a very important factor in absorption. It might theoretically hold also for the alimentary canal, since these solvents are absorbed there with considerable rapidity. This view is supported by the clinical experiences, although our experiments on rabbits (Series 2) can scarcely be interpreted in its favor. As concerns the skin, the experimental results constitute a positive refutation of the quicker absorption of alcoholic solutions in this situation.

The relative inferiority of alcohol to the other solvents is not sufficient to be of importance; while its greater fluidity and its miscibility with water constitute practical advantages more than sufficient to counterbalance the theoretical deficiencies. In emergencies, however, the value of the other solvents, particularly oil, should be borne in mind. It is interesting to note that the use of the latter antidote preceded that of alcohol.

GENERAL CONCLUSIONS.

From the above experiments the following conclusions may be drawn:

1. Alcohol has a local antidotal effect to carbolic-acid burns, due to its solvent action.

2. There is no evidence of chemical antagonism between alcohol and phenol.

3. There is no effect produced by alcohol on carbolic-acid poisoning after the latter has been absorbed into the system, as is shown by the intravenous experiments on dogs.

4. Alcohol and phenol placed in the stomach give no different results from phenol alone.

5. Lavage with alcohol is effective when the phenol is in the stomach, but its superiority over lavage with water is not pronounced.

From the clinical aspect it appears that alcohol has a local antagonism to carbolic acid. When the latter is taken in whisky the feeling of discomfort is less marked, and the local eschar is absent or but slightly evident. In cases of poisoning, lavage with alcohol is apparently an effective method of treatment. This is borne out by a comparison of thirteen cases here reported with a mortality of 15 per cent., with the collection made by Falck[21] in 1868 of forty-six cases in which the acid was taken internally with thirty-five deaths, a mortality of 65 per cent. On the other hand, the fourteen cases treated at the Lakeside Hospital by lavage prior to the use of alcohol with three deaths, a mortality of 21 per cent., give results so nearly akin to the alcohol cases that it would appear that the lavage were the dominant factor rather than the alcohol. When it is considered that it was only in the early nineties that stomach washing came into general use, and even later that the fear of its use in cases of corrosive poisoning was overcome, it seems probable that the good results in carbolic-acid poisoning from the use of alcohol, during the past few years, were due to the lavage and not to any antidotal property of the alcohol.

The authors do not wish to be interpreted as considering that alcohol is of no value in cases of carbolic-acid poisoning. *A priori* its solvent action and a slight tendency in the experiments with phenol in the dog's stomach, to an earlier rise in blood pressure, when the stomach is washed with an alcoholic solution, than when water is used, point to its value as a means of removing the poison from the stomach. From abundant clinical evidence, both in their own experience and in literature, it would appear to them to be an aid, when properly used, in the saving of life. On the other hand, this same solvent property, and the more marked symptoms of intoxication, when the poison has been taken in whisky, seem to establish a contradiction to the alcohol being used as an antidote and left in the stomach.

The procedure recommended is immediate, abundant lavage with 10 per cent. alcohol, this to be followed by lavage with plain water, and stimulation as indicated. The point to be borne in mind is that alcohol is not effective after the carbolic acid has been absorbed and, to

21. Falck: Ref. Blyth. Poisons. Their Effects and Detection. Wood's Library, 1885, p. 146.

be of value, must be used while the poison is still in the stomach.

The other common methods of treatment of phenol poisoning are now being investigated, and the results will be communicated later.

The fact that three of the five fatal cases in the Lakeside Hospital series died of pneumonia, and one, at least, of these of a definite bronchopneumonia of the inhalation type, has impressed the authors with the necessity of care in the method of performing lavage in this class of cases. With the patient lying on his back, in a comatose condition, with the gastric contents regurgitating around the outside of the stomach tube, it is a simple matter for material to enter the larynx and set up an inflammatory process in the lung. To overcome this danger, the authors recommend, immediately after the tube is passed, to turn the patient on his side or face, with the head low, thus allowing any fluid in the pharynx to escape through the mouth. Since this method has been used, there have been but few pulmonary signs during convalescence.

For his kindness in directing the work and for valuable suggestions and criticism, the authors wish to express their sincere thanks to Dr. Torald Sollmann.

TESTS FOR ACETONE IN THE URINE.*

ALONZO ENGLEBERT TAYLOR.

SAN FRANCISCO.

The interest of the surgical section of the medical profession is just now deeply concerned with the question of acetonuria. This interest has been awakened by observations of the frequent occurrence of the urinary acetone-complex following anesthesia and associated with a toxicosis that has been fatal in a number of instances. That acetone occurs frequently following anesthesia has been long known, and that it frequently occurs following the ingestion of many narcotics is equally well known. That the toxicosis is the result of the acetone-complex, that it is, in other words, an acid intoxication, is not demonstrated. On the contrary, it is much more probable that the toxicosis and the acetone-complex are fellow results of a widespread autolytic degeneration, of a ferment intoxication that has been in some unknown way inaugurated by the anesthetic or narcotic. It is known that many poisons act, in large part, by the inauguration of such autolyses, and this observation holds as well for narcotics as for phosphorus. At present acetone is held to be always derived in the body from the fats through the intermediary stages of b-oxy-butyric and diacetic acids, but it can not be denied that it might have other derivations. Chemically, acetone might be easily derived from glycerin through the intermediary stage of di-oxy-acetone, and other reactions that are feasible from the chemical point of view will be easily recalled. For the anesthetics, a second element enters into the discussion. The chemical relations of chloroform and ether as so close to acetone that it is probable that a certain amount of acetone may be formed in the body from these substances. We have to deal, therefore, with a derivation of acetone from the fats of the body under the influence of a toxic autolysis; and a derivation of acetone of purely chemical nature from the anesthetic. Whether or not acetone occurs in the urine following every administration of chloroform is not known; in the published researches reliable methods have not been used. Certain it is that acetonuria is now being diagnosticated by unreliable tests.

For several years I have tested nearly all the urines that have come under my notice with the different tests for acetone, and have also had a large class experience with mixed urines. These experiences have taught us that the commonly used tests for acetone are quite valueless, in that they yield positive results with urines free of acetone in the practical sense. There are two really good tests for acetone, those of Stock and of Denigès. Both these tests have been repeatedly recommended for clinical use, but for some inexplicable reason they have not been employed to any extent by clinicians. The test of Stock is a particularly reliable one, because it is a test for ketones and is not given by alcohols and aldehyds. It is very simple and rapid in execution. One must use for it the distillate of the urine. This, it must be insisted on, must be the rule for all tests for acetone. In classroom work we use from 50 to 100 c.c. of urine, which is made acid by the addition of a few drops of either acetic, hydrochloric or sulphuric acids. The first 10 c.c. of distillate will contain nearly all the possible acetone. For the use of the older tests for acetone (the iodoform, the mercuric oxid and the sodium nitroprussid tests), the distillate must be subjected to a second distillation; for the Stock and Denigès tests, however, this is not necessary. About an inch of the distillate is placed in a test-tube, a drop or two of a 10 per cent. solution of hydroxylamin hydrochlorid added (shaken), then a drop or two of a 5 per cent. solution of sodium hydroxid (shaken), then a couple of drops of pyridin (shaken), then about an inch of ether (shaken), bromin water is then added, drop by drop, with mixing until the ether layer becomes yellow, and then a few drops of strong hydrogen peroxid are added; if acetone be present, the ether will turn a distinctive green-blue. The test sounds a little formidable, but when the reagents are ranged in a row of dropping bottles, it is very simple. The test is not very delicate; for example, I have never seen a positive test in a normal urine of a person on a diet of not over 100 grams of fat *per diem*, though we know that all urines contain a faint trace of acetone. The test is very elective, and for practical work the lack of a greater sensitiveness is an advantage. The test of Denigès is quite as easily carried out. About an inch of the distillate in a test-tube is mixed with an equal amount of a solution of the subsulphate of mercury (mercuric oxid 50, sulphuric acid 200, water up to 1,000) and the mixture allowed to simmer (best stoppered) for about five minutes. A white crystalline precipitation occurs on cooling, which is very distinctive in appearance. If acetone be present in excess, the test is less well given. If but a trace be present, a trace of sodium chlorid will aid the precipitation, but it must not be added in excess. This precipitate is not soluble in dilute hydrochloric acid.

These two tests agree. I have never seen the Stock test present without finding the Denigès test positive. In a few instances I have obtained faint reactions with the Denigès test when the Stock test was negative. Equally distinctive is the Bamberger test: the formation of crystals of p-nitro-phenyl-hydrazone-acetone on heating the distillate, acidulated with acetic acid, with p-nitro-phenyl-hydrazin. It is not a convenient test, however, since the crystals must be recrystallized from alcohol and their melting point determined.

It is a yearly experience in our classroom work that, with the mixed urine of the students, the iodoform reac-

* From the Hearst Laboratory of Pathology, University of California.

tion is quite regularly positive, the mercuric oxid and the sodium nitroprussid tests very often positive, and the tests of Stock, Denigès and Bamberger negative. I have often had the same experiments with individual urines, and, although it has been most often noted in cases in which the patients were on drugs of various kinds, I have often seen it in the urine of healthy persons not taking any drug. When acetone is present, the iodoform, mercuric oxid and the sodium nitroprussid tests are positive; the error is always on the other side, they yield positive results when acetone and diacetic acid are absent.

I have often found acetone to be present as indicated by the tests of Stock and Denigès, without a reaction for diacetic acid being obtainable. This latter substance is tested for as follows: The urine is acidulated with hydrochloric or sulphuric acid and then extracted with ether. The ether will contain other substances besides the diacetic acid and acetone, and may be purified, if desired, as follows: The ether is shaken with an alkaline water which will take up the acid. This solution is then acidulated and the diacetic acid removed by another extraction with ether. This ether is then shaken with a solution of ferric chlorid in water so dilute that the color is scarcely discernible; if diacetic acid be present, the diluted Burgundy-red color is developed in the water. This test has one known fallacy. If the urine contain an abundance of aromatic derivatives, such as phenol, salicylic acid, the coal-tar antipyretics and hypnotics, traces of these will pass into the etherial extract, even into the purified etherial extract. To rule these out, the reaction of Arnold may be employed. The ether is mixed with an alkaline water and the diacetic acid is thus gotten back into watery solution. Five c.c. of a freshly made 1 per cent. solution of p-amidoaceto-phenon in 2 per cent. hydrochloric acid are mixed with half the volume of a 1 per cent. sodium nitrite solution, a few cubic centimeters of the watery solution and then a drop of strong ammonia are added. Two or three cubic centimeters of this mixture are then added to some 15 c.c. of hydrochloric acid, 2 or 3 c.c. of chloroform are added and then two drops of a fresh solution of ferric chlorid. The test-tube is then slowly and repeatedly inverted, so as to permit a mixing without especial shaking. The chloroform turns a marine blue if diacetic acid be present, a darker blue if large amounts be present. For unknown reasons the test fails at times; this is due possibly to the presence of other substances that pass into the etherial extract. I have never seen diacetic acid present without acetone. Diacetic acid may be present without b-oxy-butyric acid, but I have never seen the b-oxy-butyric acid present without diacetic acid.

If acetone is to be tested for, it should be done with good methods, entirely apart from any questions of the value of the information sought or the pathogenesis of the acetone-complex. The tests of Stock (described in 1899) and of Denigès (described in 1898) are certain in their results and easy of execution, and should replace the fallacious tests with Lugol's solution, mercuric oxid and sodium nitroprussid.

Alcoholic Dementia.—Dr. C. L. Hamilton says that alcoholic dementia is generally the result of organic brain degeneration, due to the action of alcohol, and that as the mental symptoms are the result of structural degeneration they are usually permanent and not relieved by the discontinuance of the poison.—*Illinois Med. Jour.*

THE TREATMENT OF ABORTION.

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Before entering on the consideration of this subject I wish to say a few words other than those concerning the treatment.

For practical purposes abortion may be defined as the interruption of gestation before viability of the child.

Physicians are not infrequently consulted as to whether or not the induction of an absorption is indicated in this or that case, and one must be very wary before giving an opinion, because the history given by the person asking for advice is often misleading. In heart disease, when there is dilatation with sufficient hypertrophy to compensate for the dilatation, the induction of an abortion should not be sanctioned. Neither is it indicated in psychical disturbances or in pulmonary diseases, except perhaps under exceptional circumstances. It is indicated, however, in pernicious hyperemesis and in some cases of chorea. In consultation with a prominent neurologist I saw one patient in whom convulsions occurred at frequent intervals, the patient not having been subject to epileptic seizures before pregnancy. They ceased after the uterus had been emptied. In nephritis the induction of abortion, in my opinion, is always indicated if the renal disease was present before the conception or if it manifests itself during the first three or four months of gestation.

In distorted or markedly contracted pelves the patient should be permitted to decide for herself whether she wishes to go to term and be delivered by Cesarean section or whether she prefers to have an abortion induced. Due consideration should be given to each and all features connected with the individual case before the induction of an abortion is determined on, and it should never be undertaken unless it has also been sanctioned in consultation with another physician. If decided on the most favorable time for its induction is before the third or fourth month of gestation. Regarding the technic to be used in inducing an abortion, the well-known method with bougies has always proved itself the most reliable. If the bougie has not brought about the desired result in from twenty-four to forty-eight hours it may be supplanted with advantage with a tampon of a strip of nosophen (tetraiodo-phenolphtalein), iodoform or sterile gauze carried into and through the cervical canal into the uterus. As much gauze should be used as can be packed into the uterus without actually employing force. If carefully done there is no danger of rupturing the sac of the ovum. The precaution of the strictest asepsis or antisepsis in all details must be insisted on.

GENERAL TREATMENT.

The treatment of abortion may be divided into four parts:

1. Imminent abortion, in which there are signs pointing to the probable occurrence of an abortion, yet in which the symptoms may again subside on appropriate treatment.

2. Progressing abortion, in which the threatened abortion has further advanced so that its actual occurrence can not be prevented.

3. Incomplete abortion, in which a part of the prod-

ucts of conception has been expelled from the uterus, but some part is still retained therein.

4. Complete abortion, in which the ovum and its membranes have been completely expelled from the uterine cavity.

In imminent abortion the patients have either an occasional "spotting" of blood, or, at other times minimal bleeding; this is sometimes associated with an uneasy feeling in the lower abdomen, seldom also with slight expulsive pains. In the second class the patients have a more or less profuse hemorrhage, sometimes so profuse as to be dangerous. In this stage expulsive pains caused by uterine contractions are usually present; they may sometimes be absent, however. The bleeding may be constant or it may be at irregular intervals. This second stage is a continuance of the first division mentioned, and the ovum is still in the uterine cavity. The cervical canal in this stage may be contracted or it may be dilated or dilatable. In the third class the cervical canal may be either closed or dilated. The bleeding in this class varies in quantity and duration. It may continue only a few hours or it may last several days, and occasionally it may continue for weeks or even for months. It is usually dependent on retained particles of placenta if the bleeding is of long duration, or membranes or placental tissue in instances of short duration. In the fourth class the uterus has usually regained firmer consistence and the cervical canal is again contracted, but it may in some instances be dilatable. Sometimes quite free bleeding may still be present in this class of patients.

So far as the treatment of abortion is concerned, there is a unanimity of opinion as to the object to be attained in imminent abortion, but as to the progressing, incomplete and complete abortion there is a wide difference of opinion. I desire to give the views arrived at in more than twenty-six years of extensive personal experience with the different methods of treatment in vogue.

Before taking up the subject under separate heads permit me to consider it in a general way. It is understood that in cases of threatened abortion everything possible should be done to prevent the mishap. When, however, it is evident that the pregnancy can not be continued the uterus should be emptied at the earliest possible moment consistent with the greatest immediate and subsequent safety for the patient, and here opinions differ as to which method assures the greatest safety. It must be borne in mind that the treatment of abortion necessarily differs in its aspects in relation to safety according to the physician's surgical training and the surroundings of the patient. An intervention that would be safe in a well-conducted institution or in the homes of the wealthy, if performed by a man thoroughly educated in special work, would not be safe in a tenement house in the hands of an inexperienced physician. The object of my address is to express what I believe to be the safest treatment under all circumstances.

In the latter part of the seventies and in the early eighties, when active intervention was first recommended in instances of abortion, prominent specialists scorned those who would let Nature take her course, saying that they were too slow in keeping pace with progress. They advocated the invariable removal of the products of conception with instruments as soon as it was evident that abortion was inevitable. I, too, was then an obedient disciple of the teaching in favor of undelayed active intervention, but I have since modified my views because to a conscientious observer experience is an excellent teacher. Advocates of active intervention in all cases of abortion take the position that patients who are treated by the expectant plan and allowed to abort spontaneously, after it is evident that the progress of the abortion can not be prevented, are in too much danger from hemorrhage and infection; that a better and more rapid involution of the uterus takes place if active measures are used; that there is less likelihood subsequently of endometritis, with perhaps the association of menorrhagic, metrorrhagia and irregular menstruation; less liability to abort again in the event of a future pregnancy; also less risk of sterility following the abortion. All these risks are avoided, they claim, if the patients who are in a stage of progressive abortion or who already have completely aborted were invariably curetted. The active intervention, it is claimed, is further of advantage because it is a great saving of time for the physician and the patient and is absolutely free from danger. I can admit only one part of all the advantages alleged for immediate intervention, namely, that of saving time. I also agree to the comparative freedom from danger if the attendant is a thoroughly trained man in that kind of work. Some recommend curetting always, even if the ovum and its adnexa have been expelled, for the purpose of completely removing the decidua vera and of making sure that no adherent particles of placenta remain; others, who modify somewhat that advice, believe and teach that it is necessary to curette only in cases of incomplete abortion. The result, especially in this country, is that the curette is used oftener than any other surgical instrument by family physicians, and curetting is thought by many to be a perfectly harmless and safe procedure. The carrying out in practice of such a view by so many physicians may be excusable if we consider that there are many whose teaching may be presumed to be from a fountain of authority who by sayings and writings taught many colleagues the necessity for curetting in abortion cases.

After seeing a very large number of infections and a number of accidents in the hands of physicians not so experienced in gynecologic technics as they ought to be to undertake this kind of work successfully, and after keeping under protracted observation a large number of patients in hospital and in private practice, I gradually began to change my views, and the more I analyzed the more certain I became that I had been in error in my method of management of abortion cases.

Experience in obstetrics has shown that those patients do best with whom Nature is allowed to take her course and no intervention practiced unless there exists a positive indication for it.

While an abortion is a pathologic process in contradistinction to the physiologic process of labor, yet, so far as the necessity for surgical intervention in abortion is concerned, it should be restricted, just as in obstetric practice, to those cases in which there is an absolute indication for it. It would carry me too far to go into all the details as to why there exists such a difference between the pathologic process of abortion and the physiologic process of parturition; let it suffice to say that the principal reasons are to be found in the changes in the placenta and in the decidua during the latter period of pregnancy and in the greater contractile power of the uterus at the normal termination of gestation.

One need not worry about a possible future danger in the greater number of instances of abortion so long as the patient is kept clean, because Nature will take better care of an ovum and its adnexa or of retained remnants than we can with fingers or instruments. After most painstaking research I have been unable to confirm

the opinion which I formerly held regarding the detrimental effects previously spoken of; I have not found that patients who are treated without surgical intervention, that is, those in whom the interior of the uterus is not scraped with a curette, or with whom forcible manual removal of the conception products is not undertaken, are in worse health than those who were subjected to the aggressive surgical method. I have not observed that the retention of decidua in women who had previously enjoyed good health gave rise to any trouble during convalescence. Neither did such women seem more liable to endometritis or to subsequent sterility. It is true that the menses after an abortion, during the first one, two or three months, are somewhat more profuse than they were during former normal menstrual periods, yet this is not caused by the non-intervention; this condition is quite normal and frequently occurs after normal delivery. I do not wish to convey the idea, however, that artificial means to empty the uterus of conception products should be neglected when an indication therefor is present. When there is an elevation of temperature or evidence of decomposition of retained conception products, or in the event of profuse bleeding, it is necessary to resort to artificial means to empty the uterus.

If we do resort to intervention for the purpose of emptying the uterus it is preferable to accomplish this with a finger rather than to resort to a curette whenever it is possible thus to accomplish our object. The use of a curette is indicated only in those cases in which remnants can not be manually removed.

Sometimes difficulties are experienced in endeavoring to remove conception products manually, but these difficulties are experienced only when the local conditions are unfavorable for such intervention. Unless the index finger can be readily passed through the cervical canal and all parts of the uterine cavity explored, perseverance in attempts at the removal of the remaining parts of the placenta, membranes or fetus by manual manipulations is not advisable. It must be granted, however, that much depends on one's dexterity; it would not be logical to expect a physician who had had but little experience with gynecologic technic to possess the same ability as one who had had special training in this work and perhaps many years' experience. The manual removal of conception products is often difficult because of frequently recurring contractions of the cervix and because of the increased size of the uterus, so that it is difficult to get the finger up to the fundus.

The employment of a curette in a puerperal uterus is more or less risky because such a uterus does not offer the same amount of resistance to the rigid, unyielding instrument as the non-puerperal uterus, and consequently a perforation may occur even in the most skilled hands. The tactile sense of the finger, however, can always determine what it is doing in the uterine cavity. Another risk incurred when a sharp curette is used for the scraping is that the endometrium may be so deeply destroyed that subsequent atresia of the uterine cavity may result. Such women can not again become pregnant, and the menstrual function may cease entirely. I have seen several such cases.

If a perforation occurs in a non-infected uterus no harm is likely to result if the patient is immediately left alone and no further intrauterine manipulating done. If, however, the uterus is infected when the perforation occurs there is great danger of peritoneal infection. Further, there is danger of a loop of intestine coming through the perforation. I have seen one such sad accident in the hands of a physician who had had considerable experience with this so-called trivial, but in reality, serious operation. Not only did the coil of bowel prolapse, but, still sadder, it was mistaken for the umbilical cord and torn. At the abdominal section, made by me, it was shown that the bowel had been deprived of its mesentery for about fourteen inches. A number of bowel accidents are on record as the result of curetting for the purpose of cleaning out conception products from a puerperal uterus. Profuse bleeding, and sometimes even alarming hemorrhage, may occur during the curetting of a puerperal uterus, and still the removal of all conception products is not assured.

Let us take for granted that an indication for the employment of a curette is present—and indications certainly do exist in some cases—what kind of an instrument should be selected? It is my opinion that a dull curette is useful only in those cases of abortion in which remnants of placenta are still in the uterus and inaccessible to the finger; then a large dull curette may be used to loosen them. I have not seen any cases in recent years, however, in which I found such an instrument necessary. Other treatment has proved itself more satisfactory and safer. If a curette be used at all, a large, broad, sharp curette is to be preferred, because no physical force is required to scrape over the interior of the uterus; a broad instrument is not so likely to cause a perforation as a narrow one, besides small adherent placental remnants are more likely to be removed by an instrument that covers a larger area.

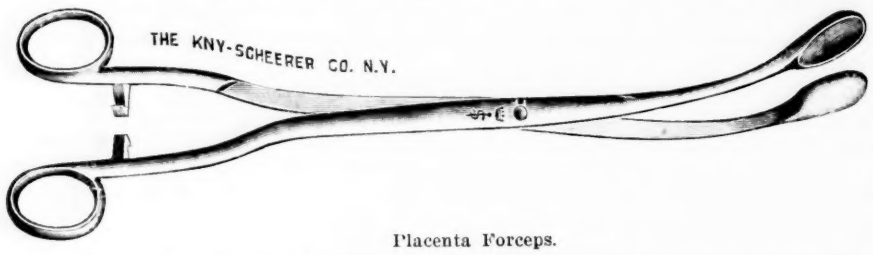
SPECIAL TREATMENT.

Imminent abortion is best treated with absolute rest in bed and the internal administration of a narcotic like codein, giving doses of 0.03 to 0.05 (grs. ½ to ¾) at intervals of one, two or three hours, according to circumstances, until from two to six doses have been taken. It may be possible that viburnum prunifolium is beneficial, but I have been unable to verify the claims made for it in the prevention of abortion when that drug alone was used. I believe that the first large dose of the narcotic and the absolute rest are the most important factors. Tampons and the preparations of ergot, or applications of ice bags, to stop the minimal bleeding sometimes present in these cases should be avoided, because these remedies may cause uterine contractions, and therefore are likely to bring about that which we are desirous of preventing. I have succeeded in preventing abortion several times after the fifth month of gestation when the cervix had been dilated to from one to two centimeters in diameter, and in one instance that is still quite vivid in my memory the dilatation had been advanced to about three centimeters. The finger could be readily passed through the cervical canal and could palpate the membranes, but no bleeding was present, yet after the administration of one-third of a grain of morphin subcutaneously, and three hours later three-quarters of a grain of codein, the expulsive pains, which had occurred at intervals of every hour or two for the previous half day, subsided and the patient went to term. Her pregnancy had advanced to the sixth month. In none of the patients alluded to had there been more than a minimal amount of bleeding; it was limited to a slight "spotting," so that one may, to some extent, be governed in giving a prognosis as to the possibility of preventing an abortion, even if the cervix is dilated or dilatable, by the amount and the character of the blood lost. For instance, in cases in which there was a dirty, quasi-grumous bloody discharge, although no marked

expulsive pains were present, and with a firmly contracted cervix, no matter what treatment was resorted to it had always been my misfortune to have the patients abort.

The consideration of progressing abortion and of incomplete abortion is the most important. Let us suppose a patient is bleeding and that the cervical canal is closed, the ovum and its adnexa still being in the uterus. The spontaneous expulsion may be aided by first giving a hot antiseptic vaginal douche and then tightly tamponing the vagina with iodoform gauze. The gauze acts as a hemostatic and also causes uterine contractions. In addition, an oxytocic should be administered internally. The gauze may remain in the vagina twenty-four hours, or, if the blood oozes through the gauze to any extent, it may be removed sooner and fresh gauze inserted more tightly. It is not at all unusual, however, to find that when the gauze is removed the entire ovum has been expelled and may then be found behind the gauze, or in further advanced pregnancy it may be that the embryo is expelled, while the rest of the uterine contents may still be in the lower part of the cervical canal, and the internal os may be again contracted above them, so that all may be readily removed with the fingers.

If the bleeding is not so profuse as to require more energetic immediate intervention, the patient may be ordered to lie perfectly quiet with the lower extremities closely adducted, which will cause the blood which flows into the vagina to form a clot, which acts as a hemostatic and also causes uterine contractions. Suppose, however, that the uterine contents have not been expelled when the gauze is changed, and the bleeding still continues, but that the cervical canal is dilated and the patient is entirely free from fever; then the safest plan is to take a sterile or, still better, a 2-inch bandage of nosophen (tetraiodo-phenolphthalein) gauze and tampon the uterine cavity with as much as can be introduced through the dilated cervical canal without using sufficient force to rupture the membranes. The upper part of the vagina is thus firmly tamponed and this will seldom, if ever, fail to incite uterine contractions of sufficient intensity to expel the ovum with or without the placenta and membranes. Usually everything is expelled.



Placenta Forceps.

It is understood that the strictest precautions should be used for the introduction of the intrauterine tampon. It should not be done with the patient in bed, only after washing off the vulva with some antiseptic solution. I have so frequently seen such erroneous procedure, supposed by the attending physician to be *secundum artem*, that I may be pardoned for referring to it in detail. The patient should be placed on a table or a couch which will permit of sufficiently good access to effect what should be done. After the thighs are flexed on the abdomen, the vagina should be thoroughly washed with green soap and hot water and a copious antiseptic vaginal douche given; the bladder should be empty. The external genitals should likewise be thoroughly washed, and the washing should be extended to the thighs and buttocks. After the washing with soap and water, all the parts should be washed with alcohol and then with an antiseptic solution. For the purpose of "scrubbing," a pad of sterile gauze or a ball of sterile absorbent cotton should be used. A brush is too rough for this purpose. After the cleansing of the patient and of the physician himself have been completed, it is advisable to surround the patient's thighs, etc., with sterile towels or a sterile sheet. The cervix should then be exposed with retractors or a speculum, and the gauze introduced.

An almost positive sign that the ovum has been expelled is the sudden cessation of expulsive pains, if they have been present previously. If the vaginal tampon is then removed, it is probable that the uterine tampon with the conception products has been expelled from the uterus. If this has been accomplished nothing further need be done; not even a vaginal douche need be given. The subsequent treatment is like that of an ordinary labor case; the external genitals must be clean and a sterile occlusion pad should be placed in front of the vulva and changed as often as may be necessary. It is always changed after each urination.

If a woman has been losing very much blood, so that more or less anemia has resulted, and if the bleeding is still continuous, it is not desirable to wait for the spontaneous expulsion by the treatment just described, if the cervix is dilated to such extent that the interior of the uterus can be explored without using too much force in introducing the finger through the cervical canal. After the introduction of the finger, the removal of the uterine contents may be aided by compression of the fundus with the external hand; the intrauterine finger loosens the conception products, and the patient should be requested to "bear down" as at child birth. To facilitate removal a placenta forceps (see illustration), which is a slight modification of the abortion forceps designed by Winter of Koenigsberg, may be used with advantage. With ordinary care there is no risk with such a forceps. The most accessible part is grasped without using so much compression as to separate the part held in the jaws of the instrument; with gentle rotary traction the part is extracted, and when sufficient is out of the external os the fingers are substituted and the extraction is completed with them. If it is thought necessary, the interior of the uterus may be examined with the finger, and if nothing further is detected this completes the work. No douche or tampon need be used if no evidence of infection has been present and if all the work has been done with the precautions described. The internal administration of ergot, however, is advisable. Two or three doses usually suffice.

If the bleeding is only moderate and the condition of the patient is good, that is, if there is no fever, then no intrauterine intervention should be resorted to, but another firm vaginal tampon should be inserted and oxytocics administered, the expulsion being relied on to take place spontaneously.

In patients with progressing abortion, but having no bleeding, either with a dilated or a contracted cervix, nothing should be done except to administer oxytocics, or the case may be entirely left to Nature unless indications arise which make intervention necessary.

If the ovum and its adnexa have been expelled and there is still a continuance of bleeding and the cervix is contracted, the administration of ergot is indicated; whether it is given in the form of fluid extract or one of the other preparations of ergot, such as ergotole or ergotin, is a matter of personal choice; I have usually given the preference to Squibb's fluid extract if the patient did not object to the taste and if the stomach did not rebel against it. In patients in whom the uterus was not markedly enlarged and the cervix firmly contracted I have seen the most marked benefit from the administration of hydrochlorid of cotarnin (stypticin) in three-grain doses, given in capsules at intervals of three hours. The powder should be ordered to be put in a dry form into the capsules. Should the bleeding not cease from the administration of one of the remedies mentioned, curetting is indicated, with subsequent irrigation with a 1 per cent. carbolic acid solution. A similar procedure is indicated if the cervix is dilated under conditions above described.

Let us now consider the cases in which the embryo has been expelled, but in which the placenta is still in the uterus and the cervix contracted. In such instances, in the absence of fever, whether there is bleeding or not, we should treat the patient on the quasi-expectant plan and firmly tampon the vagina with iodoform gauze and administer ergot to bring about uterine contractions. I should not consider the necessity for more active intervention unless there was evidence of disintegration of the uterine contents. If the cervix is dilated, the uterus may be tamponed as previously described, or the placenta should be removed manually if it is not expelled spontaneously in twenty-four hours.

In that class of patients in whom the abortion is complete nothing at all should be done except to order rest in bed the same as after confinement. I believe the teaching that they should be curetted for the purpose of removing the decidua inadvisable.

It is obvious from what I have stated that I prefer to give the expectant plan of treatment the widest possible range, and I adhere strictly to it unless there are contra-indications to it.

In instances of atypical bleeding, several weeks or months after a supposed complete abortion, one should not hesitate to examine the interior of the uterine cavity manually to ascertain whether the bleeding is caused by remnants of adherent placenta, a deciduoma or perhaps malignant growth, if a previous curetting and internal medication have been without effect. The cervix in such cases must be dilated to permit of the introduction of the examining finger. Usually steel dilators are made use of for this purpose, but some physicians prefer tents and still others use iodoform gauze. After having employed these several methods at different times for several years past, I have practiced discission of the posterior cervical wall as the most satisfactory method of rendering the uterine cavity rapidly accessible to manual examination under the circumstances mentioned. It is quicker than any other method, and in my experience devoid of risk of subsequent infection, and it has otherwise no untoward consequences. The uterus is steadied with a double tenaculum forceps, one blade on each side of the median line; a scalpel, or a hysterotome, or a pair of scissors is used to split the posterior wall of the cervix, carrying the incision through the internal opening of the cervix, after which the uterine cavity will be found accessible to the average-sized index finger. By this method we have a smooth and clean wound, and after examination it can be readily closed with a few interrupted chromicized catgut sutures. I have made a considerable number of intra-uterine examinations after having resorted to this procedure, and so far have never failed to get an absolutely satisfactory result.

Let us now consider those patients in whom there is evidence of infection. In such cases the uterus should be emptied as soon as possible, whether the cervix is dilated or contracted. If the latter is the case it should be dilated. I prefer for this purpose a branched steel dilator. An excellent instrument of this kind has been devised by my associate, Dr. A. Brothers. It gives an equal circumferential dilatation. It would be still better if the branches did not have so much spring. One should use a steel dilator with much discretion, in order not to tear the cervical structure. In a few instances I have used two rubber condoms, one inserted into the other so as to make it stronger, after the cervix had been sufficiently dilated to enable me to pass them through it. The end is firmly tied around the point of a Davidson's syringe, then the appliance is ballooned like a Barnes' bag dilator. This gives gradual dilatation without any risk of causing an abrasion. The only objection to this method of dilatation is that it is slower than the steel dilators. After there is sufficient dilatation the uterus should be cleaned out. If adherent particles are present they must be detached. If the entire cavity is not accessible, then a broad dull curette should be used. The uterus in these cases should be irrigated with three or four liters of a 1 per cent. carbolic acid or some other antiseptic solution. Intrauterine tamponade, in my opinion, is detrimental in all puerperal cases, because the drainage ascribed to it becomes illusory after the first few hours, and then it has a tendency to retard drainage instead of having the opposite effect, as is claimed for it.

If the abortion has taken place and one has reason to believe that there are only small remnants of adherent placenta retained, which give rise to the infection, and the cervix is not dilated, resort may be had to the curette without dilating to the extent spoken of; frequently no dilatation is required. A Martin curette or a strongly-built, broad irrigating curette answers best. I wish to repeat, however, that a curette should be used only when there is an absolute indication, and not on the slightest pretext, as has been done so frequently in the past and unfortunately is still being done. The curette has done much harm by causing deaths and prolonged illness, so that I can not lay too much stress on the objection to its injudicious use. The physician who employs it must be trained; it should never be used by any one inexperienced, especially in puerperal cases, because it is a dangerous instrument if improperly handled.

To go into details regarding the treatment of the septic infections following abortions would carry me too far. I will only allude to one other class, the most serious of all so far as life is concerned—sepsis in its severest forms following abortions, especially criminal abortions. Such cases tax the judgment of the most experienced to the utmost. Let me illustrate with only one example of the many patients that I have seen and operated on with varying results:

Patient.—M. S. was seen July 22, 1905, with Dr. George Doty. The patient was 20 years old and single.

History.—She had had a spontaneous abortion at about the second month of gestation, three days previously. When her physician first saw her the temperature was 99. When I saw her the temperature was 102.4 and pulse 90. There was

sensitiveness over the lower abdomen on pressure; the uterus was but slightly enlarged.

Treatment.—She was at once removed to a hospital, and the interior of the uterus explored with a curette because the cervix was too contracted for me to make a digital examination. A small quantity of retained material was removed. An extensive vaginal section was then made and the entire pelvis was packed with iodoform gauze, a procedure which I have found to be absolutely unsatisfactory in nearly every instance, despite the favorable reports emanating from other sources. (I presume this may be due to a difference in view as to what is a severe form of sepsis.)

Course of the Disease.—On the following morning her condition was much worse. On the afternoon of Sunday, July 23, the temperature had risen to 105 and the abdomen began to become somewhat distended. One severe chill and a rigor had occurred, and chilly sensations were constantly present. Although the coroner, who had been notified, had not yet put in an appearance, and in view of the fact that the patient's condition had been becoming worse from hour to hour, and from my previous experience I decided that to wait longer would be to lose time when there was still a chance to save life.

Operation.—At 5 o'clock, therefore, the patient was taken to the operating room and the abdomen opened from the umbilicus nearly down to the symphysis. Evidence of an acute septic peritonitis was present; the intestines throughout were inflamed and those of the pelvis were covered with lymph exudate. Some sero-purulent fluid was present in the lower abdomen. A pan-hysterectomy was done with removal of the adnexa, and the greater part of the broad ligaments was also extirpated. The abdomen was freely flushed with saline solution and the pelvis lightly tamponed with gauze, which was brought out into the vagina. On the following morning the temperature had dropped to 101 and the chilly sensations had entirely disappeared; the patient felt perfectly comfortable and was able to leave the hospital in excellent condition two weeks after her admission. From the third day on, however, she was out of bed.

Here we had evidently operated just in time; a day later, yes, perhaps only a few hours later, it would have been impossible to save life.

Such an example illustrates better than many pages of writing the difficulties one experiences in deciding what is the proper course to pursue with cases of severe sepsis following abortion. How often do we have patients whom we hope to save by less radical procedures until it is too late! If we operate early and the patient recovers, we rightfully ask ourselves whether the patient might not have recovered without such radical operation, or if she got well despite the operation? Such a query in the instance narrated, of course, can not be considered, because we had the objective proof in the intra-abdominal condition, and I have had similar proof in other cases, but, unfortunately, in the majority of such cases my patients have died, either because I operated too late or because the ailment had been too foudroyant from the beginning. Hence with patients having the severe forms of septic infection, patients with bacteriemia from abortion or following labor at full term, we are placed in an uneviable position; we do not know by any definite landmark, if I may use that term, what decision we should come to to save life, so far as a major surgical intervention is concerned. Hence it is that from time to time we have varying opinions of a particular form of treatment. Examination of the blood for bacteria, which we hailed only a short time ago as the most important aid in helping us decide, has been found wanting in most of the instances that have come under my observation. The silver preparations of Credé and antistreptococcus serum have been equally unsatisfactory in their therapeutic value in most of my severe cases. Once in a while, it is true, a patient recovers whom we had reason to believe to be beyond recovery, but whether this is due to the alcoholic stimulation, which I believe should be generously employed in sepsis, or to one of the remedies used, or—and that seems more probable to me—to the inadequate amount of poison in the system of the patient and her strong vitality and ability to withstand that poison, is at present only a matter of speculation. In my opinion the future remedy will be a serum, which I hope may soon be discovered.

The guide which I have adopted for myself is best illustrated in the example cited. If a patient has no decomposing elements in the uterus to account for the infection, or even if she has, and there are reasons why they can not be satisfactorily removed, and if there is no exudate in the pelvis, so that the focus of infection seemingly is limited to the uterus, and such a patient is gradually becoming more ill, the offending organ should be removed ere it is too late. It may be possible that sometimes we may err in operating on a patient who might possibly have recovered without operation, but we can do no more than use our best judgment most conscientiously applied.

An exceedingly interesting feature from a pathologic viewpoint is that sometimes in the most virulent forms no evidence of micro-organisms in the uterus is reported by the pathologist. This, too, I may best illustrate by citing an example:

Patient.—A. B., aged 30, was seen in consultation July 18, 1905.

History.—She is the mother of four children, the last born eleven days previous to consultation. On the third day postpartum, her temperature was 102, pulse 84. Her physician then gave an intrauterine douche. Later chills occurred, and the patient also complained of pain in the right iliac fossa. The temperature varied from 103 to 105, the pulse from 110 to 120. The patient was delirious at times. The abdomen was not greatly distended, but it was sensitive to pressure. The uterus was much enlarged and relaxed in consistence. The diagnosis of puerperal sepsis, with probable diffuse septic peritonitis, was made.

Operation.—The physician in attendance and the relatives desired that an attempt be made to save life by operation, despite the fact that they were informed that such an attempt was almost useless. I finally consented with reluctance. The expected result occurred only sooner than was anticipated; the patient died on the table at the completion of the operation. Yet no micro-organisms were found. The diffuse septic peritonitis that was diagnosed was found to be present.

Examination of Organs.—Macroscopic Examination.—Uterus measures 9x7x6 cm. and has been laid open. Mucosa of canal necrotic looking. Ovaries normal size and fibrous, tubes normal.

Microscopic Examination.—Ovaries and tubes show chronic inflammation. Wall of uterus shows scattered groups of round cells. These small abscesses extend all through the uterine wall, but sections stained by Gram's method do not show any collections of cocci. Scattered here and there are occasional round bodies, which look like cocci. Mucosa appears to be replaced by necrotic tissue.

Diagnosis.—Acute metritis. Chronic salpingo-oöphoritis.

I have several times received negative reports in such cases, so that I should be glad to be enlightened on this.

39 East Sixty-first Street.

A Definition of Urethral Stricture.—MacGowan defines stricture as a lessening of the normal caliber and interference with the dilatability of a urethral canal by round-celled infiltration, or deposit within its walls or in the corpus spongiosum of cicatricial connective tissue as a result of prolonged or chronic inflammation, or mechanical or chemical injury.—*American Journal of Urology.*

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN.

CHAPTER XII.

ASTRINGENTS.

Astringents are substances which produce a constriction of all the solid tissues with which they are brought into intimate contact. All substances that are capable of forming precipitates of albumin and gelatin, which are insoluble in the body fluids, are capable of acting as astringents. Substances of this class have a peculiar action on mucous membranes, causing wrinkling of their surfaces and diminution of secretion; they precipitate not only proteids and gelatin, but also alkaloids and many glucosids.

The action of astringents, irritants and caustics is largely a matter of degree, the caustics acting as astringents when sufficiently diluted, while all astringents produce at least a transient and slight irritation, and when applied in concentrated form to mucous membranes many of those classed as mere astringents are capable of causing considerable irritation, which in the stomach may give rise to vomiting, and in the intestine to diarrhea. Some astringents are essentially mild in their action, while others, being nearly insoluble, can not be brought into intimate contact with the tissues in concentrated form; these can not produce more than a very mild and fleeting irritation, or stimulation, which is followed by lessened permeability of the capillary walls and diminished congestion.

By their irritant action, drugs of this particular class may increase a severe acute inflammation without being able to produce their typical astringent effect, hence they are not nearly so useful in such conditions as i chronic inflammations. The vegetable astringents owe their action mainly to the presence of tannins, substances belonging to an ill-defined group, possessing an astringent action as their best defined property. Other organic acids play only a minor rôle as astringents. The tannins give blue-black or greenish-black reactions with ferric salts; they precipitate proteids, (leather being the product formed with connective tissue), alkaloids, metals and some other substances; they yield pyrocatechin or pyrogallol on destructive distillation. Their therapeutic actions are independent of their chemical peculiarities, and they are severally indicated rather with reference to the presence or absence of extractive matter.

The combination of tannin with peptone is soluble in the gastric juice, and this and the insoluble albumin tannates are decomposed in the alkaline juice of the intestine, the tannin forming alkaline tannates which possess little or no astringent action. If the free tannins reach the intestine after the administration of extracts of the crude drugs, they act on the mucous membrane, lessening intestinal secretion; this greatly modifies the bacterial development, and therefore the general intestinal conditions. Some of the metallic albuminates are soluble in an excess of proteid, and when in such a case the liberated acid is corrosive, there is a penetrating corrosive action such as that of zinc or mercuric chlorid. With an insoluble precipitate, such as lead albuminate, which forms an impervious coating, and a mildly astringent acid, like acetic, there is a typical astringent and non-irritant effect.

The same astringent substance may be used in a variety of conditions, and a number of different astringents are applicable to a given condition. A better acquaintance with the different tannins may lead to the selection of certain ones for particular cases, but at the present time we are guided more by the physical condition in which a given one is available; thus the official tannic acid is readily dissolved in the stomach, where it combines with the proteid of the content, or of the mucous membrane, whereas the tannin of gambir (gambir replaces the catechu of the Pharmacopeia of 1890) is protected by the presence of gum and extractives, and so passes into the intestine, there to exert its astringent effect. We can not attempt anything like a complete enumeration of the various uses of each of the astringents, but must content ourselves with summarizing briefly the principal indications of astringents and some of the chief characteristics of the more common remedies of this type.

Uses of Astringents.

Astringents are used internally in the treatment of diarrhea and dysentery, in congestion of the mucous membrane of the stomach and intestines, and for hemorrhage in the alimentary canal and other directly accessible regions. The use of astringents—either organic or inorganic—for their effects on parts which can only be reached by way of the blood vessels is wholly irrational, and when benefit follows it is not due to the astringent action, since by their very nature astringents can not exist free in the blood in sufficient concentration to exert an astringent action. Traces of tannin are not astringent, any more than they are irritant, and astringents act only when brought into intimate contact with the tissue in sufficient concentration.

The metals are poisonous when absorbed, and, as a rule, vegetable astringents are to be preferred for internal administration, particularly when they must be used for a considerable period. Pure tannin, or tannic acid, as it is designated in the Pharmacopeia, may be used locally whenever a purely astringent action is indicated; for example, when secretion is excessive, and when it is desired to harden the skin in order to prevent excessive sweating.

The treatment of accessible, inflamed, mucous membranes with antiseptic solutions, and more particularly with solutions of hydrogen dioxid, has greatly lessened the use of astringents, and the cleansing of an infected surface should be a routine procedure even when an astringent is to be applied subsequently. Dry tannin insufflated against an elongated palate often affords instantaneous relief.

Tannin in the pure state is rarely used internally because of its irritant action on the stomach, one of the preparations of astringent drugs being preferred in such cases. The dry powder acts as a styptic when applied to bleeding surfaces, but it must be borne in mind that tannic acid and all other astringents when given by mouth exert their astringent action only on the alimentary canal.

The various proprietary remedies, composed of tannin and albumin, gelatin or aluminum, have not been shown to possess any decided therapeutic advantages over the official astringents, and several of the proprietary compounds, owing to their variable composition, must necessarily be uncertain in their uses and action.

Tannic acid in simple solution combines with the albuminous contents of the stomach, and with the mucous membrane itself if the stomach be empty, and the tannin in concentrated solution; it may then give rise to vomiting and even to diarrhea. This irritant action of the astringents leads to the use of several of them, alum, and zinc and copper sulphate, as emetics.

Tannin, being a precipitant of alkaloids, is useful as an antidote to those poisons when they are in the stomach—not when they have been given hypodermically, except possibly in the case of morphin which is excreted into the stomach. The tannates thus formed are slowly broken up, and the stomach must be evacuated by emetics, or, preferably, by the stomach pump, as promptly as possible, tannin being added to the water which is used to wash the stomach after evacuation. Tea and coffee contain tannin, and, since they are almost universally available in emergencies, their use is very common. Torald Sollmann[1] made some experiments to determine the efficiency of infusions of tea and coffee as precipitants for various alkaloids and metals, and found the infusion of tea much the more active, but neither of them very reliable for the commonly used alkaloids, while the only metals for which tea (infusion) would be useful are mercury, lead and silver. As a single dose of lead never gives rise to poisoning, and as poisoning with silver salts is extremely rare, we must conclude that poisoning with mercuric salts is practically the only instance likely to be encountered in which tea would prove to be an effective precipitant. The use of tea and coffee as stimulants in poisoning depends mainly on the caffein, and, of course, these remarks as to their limitations do not apply to the stimulant use of them.

1. Journal of Medical Research, vol. vii, No. 1, p. 43.

VEGETABLE ASTRINGENTS.

ACIDUM TANNICUM.—U. S.—This is a light yellowish amorphous powder of a characteristic odor and a strongly astringent taste; it is very soluble in water, alcohol or glycerin.

Average dose: 0.5 gm. (8 grains).

GLYCERITUM ACIDI TANNICI.—U. S.—A 20 per cent. solution of tannic acid in glycerin.

Average dose: 2 c.c. (30 minims).

TROCHISCI ACIDI TANNICI.—U. S.—Each troche contains 0.06 gm. (1 grain) of tannic acid with sugar and tragacanth, flavored with orange-flower water.

These troches are used almost exclusively in affections of the mouth and throat.

Gambir (catechu), kino, krameria and many other vegetable drugs contain large amounts of their peculiar tannins, together with mucilaginous and other extractive matter which tends to prevent the tannin from forming compounds in the stomach and thus preclude its action on the mucous membrane before it comes into the intestine, hence the preparations of these substances are more useful in the treatment of diarrhea than are pure tannin and its preparations.

GAMBIR.—U. S.—Gambir was introduced into the present Pharmacopeia to replace catechu of the earlier editions. It is an extract prepared from the leaves and twigs of *Ourouparia gambir* and occurs in irregular masses, varying in color from reddish brown to a pale brownish gray. It is inodorous, but has a slightly bitter, very astringent taste, with a sweetish after-taste.

Average dose: 1 gm. (15 grains).

TINCTURA GAMBIR COMPOSITA.—U. S.—This represents 5 per cent. of gambir and 2.5 per cent. of Saigon cinnamon in diluted alcohol.

Average dose: 4 c.c. (1 fluidrachm).

TROCHISCI GAMBIR.—U. S.—Each troche contains 0.06 gm. (1 grain) of gambir with sugar and tragacanth, flavored with orange-flower water. These troches are well adapted for use in sore throat, after the throat has been sprayed with a solution of hydrogen dioxid, instead of the astringent gargles which were formerly so much in vogue.

KINO.—U. S.—The inspissated juice of *Pterocarpus marsupium* was introduced into medicine by Dr. John Fothergill about 1757. Like Gambir, it may be given as a powder, preferably combined with opium and aromatics, as in the compound powder of Kino N. F.

Average dose (of kino): 0.5 gm. (8 grains).

TINCTURA KINO.—U. S.—The strength of this preparation has been reduced to 5 per cent. to obviate its tendency to gelatinize.

Average dose: 4 c.c. (1 fluidrachm).

The following prescription, though somewhat complex, is a slightly modified form of one used in certain hospitals with satisfactory results; although the chalk is alkaline, it does not appreciably lessen the astringency of the mixture, as do the carbonates of the alkalies which exist in the intestine. The compound tincture of gambir, or the tincture of krameria, may be used instead of the tincture of kino.

℞.	Cretæ preparatæ	℥i	4
	Tincturæ kino	℥iv	15
	Tincturæ opii	m. v	3
	Spiritus chloroformi	m. lxxv	5
	Aquæ menthæ piperitæ	℥x	40
	Syrupi aurantii q. s.	℥iii	100

For children of from 3 to 10 years of age, from one-half to one teaspoonful of this mixture may be given every two or three hours; for adults the dose is one tablespoonful.

Another combination of chalk which has attained very great popularity in the treatment of diarrhea is the:

MISTURA CRETÆ.—U. S.—Chalk Mixture has the following composition:

℞.	Cretæ preparatæ	gr. xc	6
	Pulveris acaciæ	℥i	4
	Pulveris sacchari	gr. cl	10
	Aquæ cinnamomi	℥x	40
	Aquæ q. s. ad	℥iii	100

Average dose: 15 c.c. (4 fluidrachms).

The mixture is so well known that it is mentioned merely as a reminder of one of our best and simplest remedies for diarrhea. It is peculiarly adapted for combating the diarrhea of children. Severe cases may require the addition of a few drops of the deodorized tincture of opium to each adult dose, or a corresponding addition of paregoric (the camphorated tincture of opium) for children.

The vegetable drugs that contain tannin are so numerous, and their general therapeutic actions are so similar, that we shall merely enumerate the following well-known vegetable astringents and the available, official, preparations:

Rubus (blackberry-root bark)—fluidextract and syrup.

Red rose—fluidextract and syrup.

Geranium—fluidextract.

Hematoxylon—extract.

Rhus Glabra—fluidextract.

Gallic acid is sometimes recommended as an astringent, but it possesses no such action except that of any very weak acid, and it is absolutely useless for hemorrhage in the lungs, kidneys and other regions reached only by the circulation.

Though opium does not contain tannin, it would be a distinct omission if we failed to mention some of its indications in this place, since these articles are intended primarily to call attention to the possible therapeutic uses of the official substances, and since the arrangement into groups, such as astringents, is merely for convenience. Small doses of any of the opium preparations afford one of the surest means of relief in diarrhea. They are commonly combined with astringents, inorganic as well as organic, with excellent results, despite the chemical incompatibility existing between the alkaloids and the various tannins or metallic salts. The preparations of opium have been mentioned in the earlier chapters, and we now merely wish to call attention to methods of combining these agents.

℞.	Tincturæ gambir compositæ	℥i	30
	Tincturæ opii deodoratæ	m. x	5
	Bismuthi subnitratis	℥iiss	10
	Aquæ camphoræ q. s.	℥iii	100

Sig.: One teaspoonful hourly for three or four hours, then every two, three or four hours.

Any one of the insoluble bismuth salts may be used, and tincture of kino or krameria substituted for the compound tincture of gambir, Similarly, an appropriate amount of the camphorated tincture of opium may be substituted for the deodorized tincture. When it is desired to give the same active ingredients in the form of a dry powder, the following may be used:

℞.	Opii pulveris	gr. v	3
	Bismuthi subnitratis	gr. cl	10

M. Ft. pulvis et div in Chart x.

Sig.: One powder to be given every two, three or four hours, according to the needs of the patient

Here, again, the combination may be almost endlessly varied by using one of the other forms of insoluble bismuth salts, the deodorized opium, or by adding a small proportion of one of the vegetable astringents like kino or gambir.

The pill of lead and opium is well adapted for securing a very slowly soluble form for administering these drugs. The pill is useful in diarrhea, but must not be long continued, lest it give rise to lead poisoning.

℞.	Plumbi acetatis	gr. ii	1
	Opii pulveris	gr i	05

To be made into one pill.

Sig.: One pill to be given three or four times a day.

Inflammation of the stomach and intestine and also gastric ulcer may be treated by an insoluble astringent powder which not only relieves congestion by its astringent property, but also forms an insoluble protective covering, preventing the contact of irritating particles of food and the gastric and intestinal secretions, besides lessening the amount of these secretions.

(To be continued.)

Altruism in the Medical Profession.—Winfield S. Hall, Chicago, in the *Bulletin of the American Academy of Medicine*, says: Every profession, every occupation in life, affords its opportunities for altruism, but he who chooses the medical profession must do so with the knowledge that to be a useful and successful member of that profession he must subordinate self to the welfare of his fellow-men.

Clinical Notes

QUININ IN PNEUMONIA.*

A. L. GUSTETTER, M.D.

Acting Assistant-Surgeon, U. S. Public Health and Marine-Hospital Service.

NOGALES, ARIZ.

Following the cases of pneumonia reported in Dr. Galbraith's article in THE JOURNAL Feb. 10, 1906, I have had many other cases, in all of which I have treated the patients according to Dr. Galbraith's method, but with a very much better result.

Pneumonia is a very prevalent disease in Nogales and vicinity. My mortality in pneumonia cases was formerly nearly 80 per cent. So fatal had the disease become that all persons possessing enough of this world's goods to carry them to the sea level refused to remain here after becoming aware of the nature of their affliction. The results reported in the following cases, I am pleased to state, are the rule and not the exception. Thus far I have not had a death from pneumonia since I began the quinin treatment according to Dr. Galbraith's method.

CASE 1.—A male, aged 24, helper on railroad.

History.—On January 31 he was suddenly seized with severe pain on the right side of chest, violent and painful coughing and inability to take a full breath without seriously increasing the pain over the right chest.

Examination.—I saw him for the first time February 1, when I encountered the following conditions: At 3:30 p. m. his temperature was 102.6, pulse 100, respirations 32. Breath sounds over the upper lobe of the right lung were greatly exaggerated; over the middle and lower lobes they were very faintly heard; on deep inspiration broncho-vesicular breathing was heard.

Diagnosis.—Lobar pneumonia, involving the middle and lower lobes.

Treatment.—I gave 50 grains of quinin and one hour later (4:30 p. m.) I gave him 25 grains more. I then ordered 15 drops of the tincture of iron chlorid to be given every three hours, beginning at 5 p. m. At 6 p. m. his temperature was 102.8, pulse 108, respirations 30. At 7:45 p. m. his temperature was 100.6, pulse 112, respirations 26.

Course of Disease.—February 2, at 7:45 a. m., his temperature was 98.6, pulse 80, respirations 24. He made no complaints of ringing in the ears and felt well enough to sit up in bed. The pain in side had entirely disappeared. Expectoration during the night was blood-tinged. When I visited him in the evening his temperature, pulse and respirations were normal. As no symptoms remained the patient was discharged.

CASE 2.—F. H., male, aged 14, schoolboy.

History.—On February 4 the patient was taken with a severe chill, pain in the right side, coughing and distressed breathing. I was called to see him the following morning.

Examination.—At 9 a. m. his temperature was 103.4, pulse 120, respirations 32. I suspected pneumonia, but the physical signs were not positive. At 4:20 p. m. his temperature was 104, pulse 140, respirations 36. Breath sounds over lower and middle lobes of right lung were suppressed; subcrepitant râles were present.

Diagnosis.—Lobar pneumonia, involving the middle and lower lobes of right lung.

Treatment.—At this time (4:20 p. m.) I gave him 50 grains of quinin, followed by 25 grains one hour later. The nurse was then instructed to give him 15 drops of the tincture of iron chlorid every two hours.

Course of Disease.—At 7:55 p. m. his temperature was 104.4, pulse 132, respirations 40. At 9:15 p. m. his temperature was 103.6, pulse 136, respirations 38.

February 6, at 9 a. m., his temperature was 101.4, pulse 126, respirations 30. Tubular breathing was heard over anterior and posterior surfaces of lower and middle lobes of right lung, and percussion elicited dullness of consolidation over the same area. He expectorated great quantities of bloody mucus. Pain in the right side had disappeared. I ordered 20 grains of quinin to be given at 10 a. m. and at 12 noon, to be followed by 12 grains every two hours. The iron was continued every three hours. At 12 a. m. his temperature was 101.8, pulse 120, respirations 28; at 6 p. m. his temperature was 102, pulse 114, respirations 28; at 8 p. m. his temperature was 101.2, pulse 110.

February 7, at 8:40 a. m., his temperature was 103.2, pulse 106, respirations 30. I gave him two pills of quinin, containing 20 grains each, at 9:30 and 11:30 a. m. He was then given one pill every two hours until he had taken six pills, or 120 grains of quinin, during the entire day. The quinin was given in pill form because of the nausea that was produced when he took it in solution. My experience with this and with another patient has decided me never to use quinin in any other manner than in solution. The pulse being of good quality, the 15 drops of iron were given every three hours. At 2:30 p. m. the boy's temperature was 103, pulse 108, respirations 30; at 6:30 p. m. his temperature was 101.6, pulse 104, respirations 28.

February 8, at 9:30 a. m., his temperature was 102.4, pulse 104, respirations 26. He was very comfortable. Expectoration was bloody and physical signs of pneumonic consolidation were well marked on auscultation and percussion. Twelve grains of quinin were ordered given every two hours. At 12 noon his temperature was 102.2, pulse 102, respirations 28; at 5 p. m. the temperature was 101.2, pulse 86.

February 9, at 8:30 a. m., temperature was 101.2, pulse 84, respirations 25. The patient complained of deafness and said that he was blind. He was able to distinguish between light and darkness, but could not distinguish objects. I therefore stopped the quinin during the entire day. The iron was given as usual. At 2 p. m. the temperature was 102, pulse 84; at 5 p. m. the temperature was 102.6, pulse 80, respirations 28. The boy's sight was somewhat better. At 8 p. m. the temperature was 102.6, pulse 82, respirations 28.

February 10, at 9 a. m., the temperature was 103.6, pulse 92, respirations 24. The vision being normal, I gave him 50 grains of quinin at one dose and ordered 12 grains to be given every three hours. At 12 noon the temperature was 102.2, pulse 86, respirations 28. The iron was continued every three hours. At 5:30 p. m. the temperature was 101.6, pulse 84, respirations 20; at 8:30 p. m. the temperature was 102.6, pulse 90, respirations 30.

February 11, at 8:40 a. m., the temperature was 102.4, pulse 86, respirations 22; at 12:20 p. m. the temperature was 102, pulse 86, respirations 22. The boy felt very well; he had no deafness nor disturbance of sight. The administration of 12 grains of quinin was continued every three hours. At 5:30 p. m. the temperature was 100.2, pulse 82, respirations 24.

February 12 (sixth day after the first dose of quinin), at 9:30 a. m. the temperature was 98.4, pulse 72, respirations 20. The patient had slept well during the night. He had neither cough nor expectoration. Fifteen drops of iron were administered every four hours. At 6 p. m. the temperature was 99.2, pulse 74, respirations 20.

February 13, temperature was 97.4, pulse 78, and the patient was discharged.

Remarks.—Out of about thirty cases of pneumonia treated according to Dr. Galbraith's method this was the first case showing any symptoms of quinin poisoning, i. e., the profound deafness and the almost complete blindness. Fortunately, both of these symptoms passed off within ten or twelve hours, and now the boy can see as well as ever.

CASE 3.—Mexican girl, aged 13.

History.—On February 15 the patient had a chill lasting about twenty minutes and later began to feel feverish. At the same time she felt a severe and sharp pain in her right side. Nothing was done for her and I was summoned the next morning, when I found the following conditions:

Examination.—Temperature was 104, pulse 150, respirations 34. The pulse was very weak and almost imperceptible. On auscultation, subcrepitant râles were heard over the lower lobe of the right lung. Breathing was very labored. The patient preferred lying on the affected side and suffered great pain when she was turned on the left side.

* See Editorial on page 804.

Treatment.—I diagnosed this as a case of lobar pneumonia and gave the girl 50 grains of quinin and ordered 25 grains more to be given one hour later, making 75 grains of quinin in one hour. Ten drops of the tincture of iron chlorid were administered every two hours.

Course of the Disease.—At 6 p. m. the temperature was 98.6, pulse 96, respirations 24. The pulse was of very good quality. The pain had left her and the cough was less frequent. This patient never suffered from deafness.

February 17, at 9 a. m., the temperature was 98, pulse 84, respirations 20. The patient was free from cough and pain and was allowed to sit up in bed.

Remarks.—In reporting a case with so prompt and effective a cure, I know that many will think there must have been a mistake in the diagnosis, but I felt just as certain that I was dealing with a genuine case of pneumonia as though I had seen the case go through the whole train of symptoms.

CASE 4.—Mrs. C., aged 23.

History.—February 2, at 2 a. m., I was called to deliver a retained placenta, the woman having one hour previously given birth to a child that had been dead at least a month. I delivered the placenta without any difficulty and, the family having engaged the services of a midwife, I left after instructing them to call me in the event of fever or any other symptom arising.

February 3, at 9 p. m., I was called to see the patient, as she was suffering from a chill and cough. Her temperature was 102, pulse 140. The lochia was very scant, but of purely normal odor. I ordered a capsule containing acetanilid 3 gr. and citrated caffein ½ gr. to be given every two hours.

February 4, at 9 a. m., her temperature was 102, pulse 150, respirations 26. Cough was more persistent. She complained of severe pain over right lung. Her breasts, which had been tightly bandaged, were also painful. At 5 p. m. her temperature was 104, pulse 150, respirations 30. The pain on the right side was much worse and breathing was labored. Auscultation breath sounds were very harsh. Having satisfied myself by examining the vagina and uterus that there was no possibility of any infectious or poisonous process going on in the uterus, I decided to wait a few hours before giving her the quinin treatment. At 9 p. m. her temperature was 104.8, pulse 165, respirations 36. On listening to the lower lobe of her right lung I now heard the subcrepitant râles very plainly, and the breath sounds over the rest of the lung were greatly exaggerated. The patient had great difficulty in breathing. I decided that it was a case of lobar pneumonia and not puerperal septicemia.

Treatment.—I gave her 50 grains of quinin and followed this in one hour with 25 grains more. Fifteen drops of tincture of iron chlorid were given every two hours.

Course of Disease.—On February 5 the temperature was 98.6, pulse 80, respirations 20. Pain had entirely disappeared. Several times during the night the patient expectorated bloody sputum; cough was not frequent. At 5 p. m. the temperature, pulse and respirations were normal. The patient felt fine, but remained in bed to complete the ten days following confinement.

Remarks.—This case was of great interest to me from the standpoint of differential diagnosis. Under the circumstances the promptness with which the symptoms were relieved was certainly gratifying to me.

QUININ IN PNEUMONIA.*

A. S. v. MANSFELDE, M.D.
ASHLAND, NEB.

Under the caption, "Quinin in Pneumonia," in THE JOURNAL, March 3, Dr. J. B. Cutter complains that Dr. W. J. Galbraith claims originality in the use of large doses of quinin, when Dr. A. J. Giesy pursued that course in 1894.

Permit me to direct attention to page 165, vol. v, Ziemsen's "Cyclopedia of the Practice of Medicine," published in 1875, a translation of Prof. Theodore Juergensen's classic article on "Croupous Pneumonia," the disease under consideration. There he says:

> "When the fever is intense, 77 grains may be given to a strong adult and 15 grains to a child under 1 year, always in one dose. I have repeatedly used both of these amounts. I have acquired my experience by gradually increasing doses, and I have never seen any harm done; in fact, it is my firm belief that even these are not the extreme limits as to quantities."

Personally I have used just this treatment for thirty years within my limited opportunities—and so much for priority. Dr. Galbraith, an old acquaintance of mine, certainly deserves great credit for bringing into prominence this old treatment of Juergensen's, which he uses exactly as I did, namely: with perfectly normal *primæ viæ*, for the reduction of high temperatures and the resulting tone to the weakened heart muscle caused by the former. Incidentally, both used it, the former without and the latter (Galbraith) with a full knowledge of bacterial poisoning removed by the large doses of quinin. Nothing new under the sun, is there?

In this connection it may not be out of place to say that Dr. Galbraith's publication demonstrates that nihilism in the use of individual drugs simply means lack of knowledge of their proper uses, with the consequent reliance on proprietary mixtures, which only too often are void of substance and, consequently, of action. Again, is it not a pity that such masterly treatises as Ziemsen's Cyclopedia seem almost forgotten by the physician of to-day? What a wealth of experience he misses!

AN UNUSUAL CASE OF SPONTANEOUS DISLOCATION OF THE SHOULDER.*

JULIUS H. COMROE, A.M., M.D.
YORK, PA.

Patient.—Chas. M., white, aged 16, schoolboy.

Family History.—Entirely negative.

Previous History.—Other than the ordinary diseases of childhood, the patient has never suffered any serious illness. No history of traumatism can be elicited.

Present History.—Since early childhood the patient has at all times been able, by means of a certain series of manipulations, which consisted, for the most part, in raising and externally rotating the shoulder, "to throw both joints out of their sockets," producing, as a careful examination revealed, a complete subcoracoid dislocation. He had also learned easily to replace the bones by a reverse movement, and in neither case was there any pain produced. At times, while engaged in active gymnastic exercises, e. g., club swinging, basketball, etc., the luxation was voluntarily produced.

During the past three months, however, he began to suffer some inconvenience when the left shoulder was either voluntarily or involuntarily dislocated, and at the same time he noticed that there was some difficulty in replacing the bone on that side. This "inconvenience" gradually grew into a dull pain, which at times was quite aggravating, and the difficulty in reposition became proportionately more marked. For these reasons he was referred to me for diagnosis and treatment.

Physical Examination.—The boy was well nourished, of good athletic physique. The appearance of the shoulders is characteristic. They are broad and extremely flat, due largely to the underdeveloped deltoids and the resulting prominence of the achromian processes (Fig. 1). The humeri are rather preternaturally movable, abduction bringing the arms to an almost parallel vertical position. Neither bone nor joint crepitus could be elicited. By the manipulations above detailed there is at once produced all the characteristic objective signs of subcoracoid dislocation of both shoulders, with the exception of abduction of the arms (which is present in slight degree): the outer aspects of the deltoids are flattened; the acromian processes are very prominent (Fig. 2); the normal position of the tuberosities below the latter are now occupied by hollow spaces, into which the tips of the fingers can be easily slipped: the humeral heads can easily be palpated the axillæ, and in forced extension can even be seen.

I made a very careful fluoroscopic examination, which was

* See Editorial on page 804.

* Read before the York County (Pa.) Medical Society.

also seen by Dr. W. F. Bacon, chief surgeon of the York Hospital, and by Dr. L. M. Hartman. In the normal state there appeared to be no gross anatomic malformations in the bony structures of the joint, with the possible exception that the glenoid cavities were more shallow than those of several others which the author examined for comparison. The capsular ligaments, however, could be very distinctly outlined with a medium tube, and the left one was unmistakably larger than its fellow on the opposite side. The latter produced a homogeneous picture, whereas the former (the left) appeared much darker centrally, as though an obstructive fluid was present, probably an inflammatory exudate from the synovial membrane. This would easily account for the subjective symptoms on the left side (subacute synovitis, with exudate) and their absence on the other. The bones were voluntarily dislocated before the fluoroscope, and their course was seen to be downward, forward and upward, the head reposing immediately below the coracoid process, with the lesser tuberosity being anterior, showing, therefore, that external rotation had taken place. In this new state it appeared that the head of the bone was lying in an abnormally large pouch, as it were, which was the chronically enlarged capsular ligament. The bones were replaced in the exact reverse order.

Figure 1.

Treatment.—I advised encasing the left shoulder in a Velpeau fixation dressing and continuing treatment as in an acute traumatic luxation. This was advocated for the double purpose of "fixing" the joint and at the same time of producing absolute rest for the inflamed surfaces. For the right shoulder I advised massage, passive motion, and regulated, gentle gymnastics, to improve the muscular and ligamentary tone. I also recommended that in about six or eight weeks the proceeding that proved most beneficial should be further practiced on both sides.

I could find no other similar case of double dislocation, purely spontaneous, in medical or surgical literature.

According to DaCosta, spontaneous (pathologic or consecutive) luxations are usually present in a joint which has been disabled by some preceding or existing form of disease, e. g., chronic synovitis, tuberculous disease, rheumatoid arthritis, and at times in severe typhoid infections. In other words, it is neither traumatic nor congenital. When the *Typhoid bacillus* is responsible for the infection, the hip is the joint most frequently attacked (with luxation), and the most frequent type it assumes is posteriorly on the dorsum of the ilium. The latter form is at times not recognizable until convalescence, and its reduction is often very obstinate. In Charcot's disease, spontaneous dislocations are rather common, the joints most frequently attacked being the knee and the hip, in the order named. In this latter pathologic condition, there is a more or less rapid destruction of all the joint constituents, with softening and marked relaxation of all the ligaments, thus permitting a greater range of motion and favoring dislocation.

The treatment in these pathologic luxations, when resolution does not set in, consists in the application of suitable apparatus or in resection as a final resort. I am of the opinion that these pathologic luxations should not be referred to as "spontaneous," and that the latter term should be restricted to those cases in which no congenital, traumatic or pathologic etiologic factor can be ascertained.

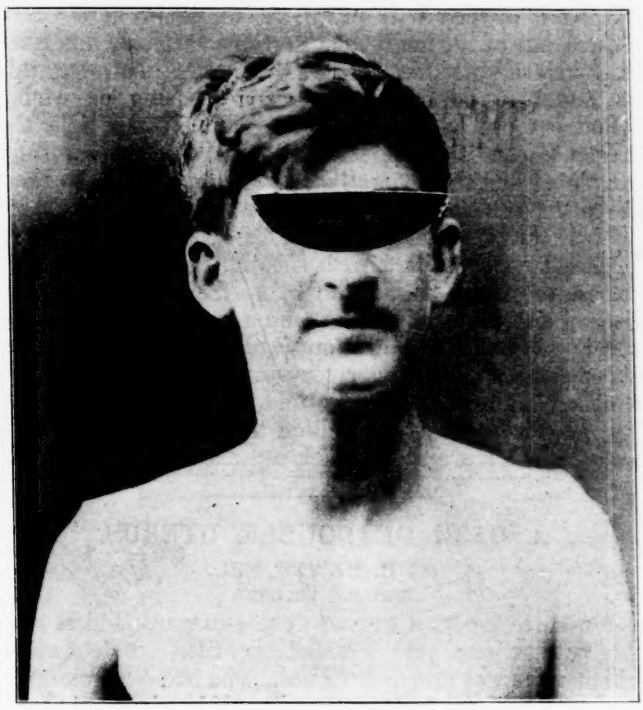


Figure 2.

HUMERUS.

Unilateral spontaneous luxations of the shoulder are not infrequent, due to the very shallow glenoid cavity and to the great mobility and exposure of the joint constituents. They are invariably anteriorly dislocated, since there are no powerful muscles to impede the course in this direction. The subcoracoid variety is the most frequent, as, to become a subglenoid dislocation, the powerful triceps tendon must be ruptured, and this is rarely accomplished, unless as a result of violent traumatism. In these cases of spontaneous dislocation of the shoulder there must be a movement of extreme abduction, which causes the acromian process to strike on the neck of the humerus, and thus to tilt the bone out of its socket, the acromian process acting as a fulcrum, the distal portion of the arm as a long lever, and the portion of the humerus between the tuberosities and the head as a short lever. It is, therefore, a disturbance of leverage, essentially, that produces a spontaneous dislocation.

SYMPTOMS.

The characteristic appearance of the patient, so well described in all text-books, is, in a large number of cases, pathognomonic of the condition. In addition, the head of the humerus is readily felt in the axilla, and when the arm is actively raised up it may even be seen as a globular prominence; the prominence of the shoulder is no longer the greater tuberosity of the bone, but rather the acromian process, since the head is pushed under the coracoid process, causing the absence of the characteristic roundness and the substitution of the "flattened" shoulder; the deltoid is naturally stretched down from the acromian to the middle of the shaft of the humerus externally, and this tends to throw the elbow out from the body. The elbow can not be brought to touch the body (Dugas' sign), since the head is wedged in between the acromian and coracoid processes.

TREATMENT.

If spontaneous reposition can not be accomplished, Kocher's method will prove successful in most cases. If not, one of the many modifications variously described will invariably suffice. In rare instances, however, this is found to be impossible, when excising or wiring (Beck) must be resorted to. At the same time the hygienic condition of the patient should be carefully regulated and the general health improved so as to reinforce the weakened joint. Two patients with persistent spontaneous unilateral dislocations of the shoulder were operated on by Ricard with success. His method is to expose the front of the joint by an incision between the deltoid and pectoralis major, and a second incision from the upper end of the first outward along the margin of the acromian. The inner portion of the capsule is now pinched into a transverse fold, and several vertical sutures placed so as to include the tendon of the subscapularis below and the thick capsule above.

A CASE OF DOUBLE UTERUS.

C. H. NEWTH, M.D.
PHILOMATH, ORE.

I wish to report a case of double uterus. I first saw the patient one year ago, when called to determine whether she was pregnant or not. She had been married five years without becoming pregnant, but had not menstruated for five months and now thought she felt motion. She called me in because the tumor seemed to be all on the left side.

On making a vaginal examination, I found the vagina divided by a septum, and at the upper end of each side of the vagina a cervix and uterine cavity. As the patient was certainly pregnant, I could not use a sound. She was pregnant on the left side. The finger passed naturally up the right side and was with difficulty passed on the left side. I asked her if she knew that she was different from other women and she said no, but on further questioning I found that both she and her husband knew of the condition, but did not know that it was different from other women. She miscarried one month later and sent for me, but, as I was away from home, she had no physician.

She miscarried again, at nearly four months, two weeks ago. I was called in four days afterward and found a retained and putrid placenta. She thought she had passed something from the right side two weeks previously, and stated that the fetus came from the left side. I removed the placenta and she is entirely recovered.

On examination I found that I could introduce one finger in each cervix at the same time. I examined the inside of the left uterus, digitally, and am convinced that there is no connection between the two cavities. There is now a rupture of the septum close to the uterus large enough to admit the tip of my finger, so that I could pass the finger up the right side of the vagina and feel the left os as well as the right. I think there is no doubt, from the conditions, that intercourse always took place on the right side, but that the right side is rudimentary, or infantile, and that conception could not take place on that side, and that it was very unlikely that the semen entered the left side.

At the first examination I found it difficult to introduce the finger into the left half of the vagina on account of the small opening, and I am reasonably certain that the male organ had never penetrated that side, although the left half of the vagina was roomy enough when once entered. At the second examination, I found the same condition, except that the opening was larger and that there was also a laceration of the upper portion of the septum. At this time the finger, passed straight in, would always enter the right side of the vagina, and my theory is that the right half of the uterus is rudimentary and that only after five years of married life the semen was accidentally introduced into the left half. The septum was probably torn when the miscarriage occurred, thus accounting for the second impregnation. I think the probability is that she will never carry a fetus to term, on account of the right side of the uterus not dilating or entering into the physiologic growth of the gravid uterus. This case corroborates the statement generally made that abortion frequently occurs in cases of uterus didelphys.

AN ISOLATED CASE OF FRIEDREICH'S ATAXIA.*

ARTHUR H. DODGE, M.D.
PHILADELPHIA.

The following case of Friedreich's ataxia presents nearly all the symptoms of the disease, according to the synopsis of Soca and Ladame, except the familial feature. Although this familial tendency is usual, cases in which direct inheritance can be traced are rarely observed. The cases of Gowers, Osler and Carre are instances. Isolated cases are far from rare and have been reported, showing nothing more of note than the sporadic occurrence.

Patient.—J. M., aged 24, single white, male.

Family History.—Mother is living, aged 60. Father died as the result of an accident at the age of 55. Parents were not related, and no nervous disease of any nature is known in the family. The father was an alcoholic. Alcoholism in parents has been spoken of as an important etiologic factor; Friedreich in his first cases insisted on the causal relationship of alcoholism in parents to this disease. The case of Vizioli was unique in this particular. Our patient was the youngest of six children. Three brothers died in childhood, two the result of measles and one from a severe burn. A brother of thirty years and a sister of twenty-seven are living in good health and show no signs of a similar affection; and they are likely to be free from this disease according to the observation of Soca that the onset of the disease commences at the same age in members of the same family.

History.—The patient was admitted to the nervous wards of the Philadelphia Hospital, in Dr. Lloyd's service, May 13, 1905, stating that the onset of his trouble was noticed after an

* From the service of Dr. James Hendrie Lloyd in the Philadelphia Hospital.

attack of influenza at the age of seventeen. The first symptom was unsteadiness and uncertainty in walking. The gait progressively became worse, and his friends noted its resemblance to a drunken man's gait. The patient frequently had to take hold of surrounding objects to prevent falling. Unsteadiness of much less extent was noticed in the upper extremities at about the same time. Three years after the onset of the disease the patient ceased walking. At no time has the patient had any pain, and the function of the rectum and bladder has been normal, except on one or two occasions when he has noticed a delay in starting his urine. The patient denies all illnesses except the milder diseases of childhood; and evidence of syphilis is wanting. He admits a free use of alcohol after the onset of his disease.

Examination.—The patient is confined to a chair, but needs no help from anyone to get to and from his bed nor does he require help in dressing. The facial movements are well performed. The hair is plentiful, black in color but profusely streaked with grey hairs. The pupils are equal and react promptly in convergence. Direct and consensual light reflexes are prompt. The visual fields are not contracted, and the ocular movements are normal. There is nystagmus of prominence on lateral deviation of the eyes. Examination by Dr. Hansell, May 19, 1905, showed the eye grounds to be normal. There is nearly constant oscillation of the head, resembling the motions used to signify yes and no. This motion is increased in frequency and amplitude when the patient is watched; also while he is talking. Speech is slow, hesitating, jerky, thick and slightly slurred, but not truly scanning. The mentality of the patient is good and there seems to be no change according to the statement of his brother. The heart and lungs show nothing abnormal. The urine contains no abnormal constituents. Strength in the extremities is well preserved. The grip in the right hand is 42 and in the left 39 on the scale of the dynamometer. There is no atrophy. The limbs are not spastic. Muscle sense is intact. Sensation over the entire body is normal. No pains of any character. Bladder, rectal and sexual functions about normal. Ataxia is present in the hands and arms to a considerable degree, but the ataxia in the lower extremities is more marked. The patient walks with support, and in doing so places the feet widely apart, and the legs are thrown about in a helpless manner. While the patient is standing the head and trunk sway very much and the patient presents the attitude of a man very drunk. The closure of the eyes causes no increase in the swaying, but it is difficult to say whether the swaying could be increased. There is antero-posterior curvature of the spine in the cervico-dorsal region, but no scoliosis. The feet are shortened from before backward, and the arch is greatly increased. The toes are dorsally flexed, especially the great toe, and the extensor tendon of the great toe is prominent. There is not the flexion of the distal phalanx which is usual.

The knee jerks and Achilles jerks are absent. The biceps and triceps jerks are present and about normal on either side. The cremasteric and epigastric reflexes are present. The presence of the Babinski reflex in Friedreich's disease is not usually spoken of with any degree of clearness in either the text-books or reported cases. In this case the Babinski reflex is very prompt and active on either side. In some of the text-books the Babinski reflex is spoken of as constantly present in this affection. In two other cases now in the Philadelphia Hospital, in a brother and sister, the Babinski reflex is absent; but these cases have advanced into the paralytic stage of the disease.

Course.—Nov. 1, 1905.—The course of the disease has been progressively downward. The speech defect and the nystagmus are more pronounced. The ataxia is greater, especially more marked in the arms since admission, and the arm reflexes are lessened. The general health is not so good as on admission.

DISCUSSION BY DR. LLOYD.

The differential diagnosis of Friedreich's ataxia offers no special difficulty, unless it be with reference to multiple sclerosis. But in Friedreich's ataxia the onset of the disease with ataxia in the lower limbs, the abolition of the deep reflexes, especially the knee-jerks, the absence of spasticity in the muscles, the absence of optic atrophy (occasionally seen in multiple sclerosis), are all significant of Friedreich's disease. The so-called cerebellar hereditary ataxia of disease, in which there are increased tendon reflexes, paralysis of ocular muscles, with disorder of sight, is not thus far a distinctly differentiated disease and is so rare as hardly to lead to a confusion with the true Friedreich's ataxia. There is a type, however, of hereditary, or at least congenital, ataxia paraplegia which deserves mention. In this disorder there is ataxia with some spasticity and actively increased knee-jerks; also disorder of speech, such as stammering, jerky enunciation, with or without nystagmus, etc. This is sometimes found in children who have suffered injury at about the time of birth, and is thus in no sense either a familial or a hereditary affection.

New Instrument

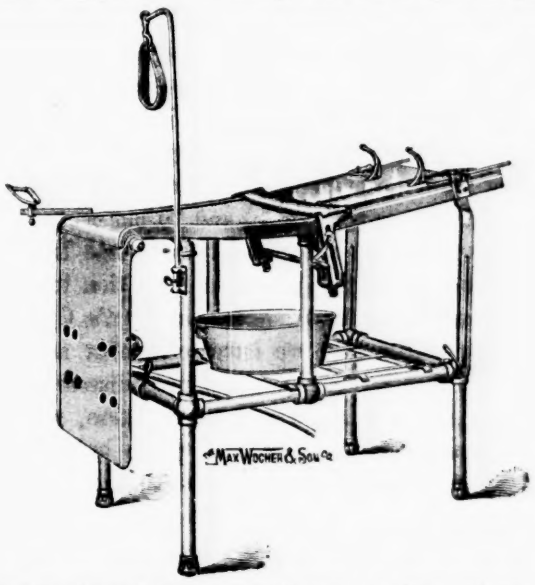
A NEW OPERATING TABLE.

REVISED AND IMPROVED.

J. F. BALDWIN, M.D.
COLUMBUS, OHIO.

About five years ago a description appeared in THE JOURNAL of a new operating table which I had devised after several years of study. Daily use of the table demonstrated, however, the existence of two or three weak points, which have finally been eliminated, and several new features have been added, and now the table seems to be about perfect.

The main points of the table, as first presented, and which are retained, are: 1. Simplicity of construction. 2. The field of operation not changing when the patient is put in the Trendelenburg position. 3. The position of the patient quickly



and easily changed by the anesthetist. 4. The patient maintained in the Trendelenburg position by shoulder straps, or (as I prefer) by tying the legs to the leg-piece.

The recent improvements add the following points: 5. The leg-extension-piece automatically drops to the proper angle when the patient is placed in the Trendelenburg position. 6. The bridge, by which the patient is arched forward as desired in kidney, gall-bladder or stomach work, maintains its position without catch of any kind and can be raised or lowered from either side. 7. The copper hot-water reservoir (electrically heated, if preferred), to keep the top of the table warm if desired for protracted operations on feeble patients.

The illustration shows the usual glass top, but I much prefer metal.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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[*Further information on second advertising page following reading.*]

SATURDAY, MARCH 17, 1906.

QUININ IN PNEUMONIA.

In the high and dry regions of Mexico and the southwestern part of our own country, pneumonia has long been dreaded by physicians because of its frightful mortality. It is to be hoped that the reports concerning the treatment of this disease by large doses of quinin, as advocated by Galbraith[1], may continue to be encouraging. We have no desire to throw cold water on this method of treatment. We shall gladly open our pages to careful reports along this line, and trust that the good reports from the southwest may be substantiated by experience in other parts of the country. Yet we wish to call attention to two or three facts that should be borne in mind.

In the first place, the use of large doses of quinin in pneumonia is not new. It has been given a thorough trial. It has not proved a specific in other hands. As Dr. Mansfelde[2] says in his communication, Juergensen thirty years ago advocated its use in large doses (77 grains) giving this amount in one dose as an antipyretic —and often repeating this dose in 48 hours—but seeing also an improvement in the condition of the pulse, respiration and nervous state of the patient. Juergensen, however, made no claim that quinin was a specific, and his death rate was between 10 and 20 per cent.

Again, this same clinician uttered some truths concerning pneumonia that will bear repetition to-day. We quote from the same article in Ziemssen's Cyclopedia: "When we realize that we have to combat not an 'inflammation' but rather a constitutional disease, and one, moreover, of comparatively short duration, we readily fall into an expectant treatment which bides its time, interferes only when necessity requires, and does not see in the mere name of the disease an indication for attack." And in another place he says it is right to "do almost nothing for, say, 80 per cent. of the cases, and to employ the most active treatment for the other 20 per cent."[3] The lessons of the self-limitation of acute infectious diseases is a hard one to learn. It is difficult to realize that from 60 to 80 per cent. of pneumonia patients will recover if let alone, and in selected cases where the extremes of life are excluded, as well as individuals who are weakened by previous disease, the mortality is low. Petresco's[4] results—a mortality of about 2 per cent.—from the use of enormous doses of digitalis, illustrate this, his patients being young soldiers in whom previously existing disease of heart, kidney, etc., had been excluded by rigid physical examination at the time of admission to the army. In private practice it is no uncommon thing for a busy physician to treat 40 to 50 consecutive cases of pneumonia by the so-called expectant or symptomatic plan, and to have no deaths. And another phenomenon of not infrequent occurrence is an apparent abortion of a pneumonia or an early crisis. Crisis on the third day of pneumonia while not common is by no means a remarkable rarity. These facts carefully considered should make one hesitate about ascribing the recovery or even the early recovery to the particular drug that has been given.

Before conclusions are drawn there should be no weak points in the diagnosis. Pleurisy, bronchopneumonia, bronchitis, influenza, malaria, etc., should all be carefully ruled out. Some of the cases reported are not, to judge from the records, conclusively pneumonia. To cite an example, Case 4, in the report by Dr. Gustetter in this issue, might well be pulmonary embolus following parturition. And in not a few other reported cases the diagnosis is not always above criticism.

While, therefore, we welcome any careful clinical observation that will help to a better understanding of the treatment of the all too prevalent and fatal pneumonia, we would call attention to the fact that the treatment by quinin is old and has once been discarded; that results to be convincing must be based on the observation of a considerable number of cases in which the diagnosis is indisputably correct; and that the fact must not be overlooked that the great majority of patients under the age of 50 or 60 will recover under any plan of treatment if it be not harmful.

1. Galbraith: THE JOURNAL A. M. A., Jan. 28, 1905, and Feb. 10, 1906. See also reports by Gustetter in this issue, p. 799, and by Cutter, March 3, 1906, p. 671.

2. THE JOURNAL A. M. A., March 17, 1906, p. 800.

3. Ziemssen's Cyclopedia, Translation, N. Y., 1875, p. 149.

4. Proceedings of XI International Congress in Rome.

BEDBUGS AND DISEASE POSSIBILITIES.

Though the bedbug has been known as an extremely unmanageable pest of humanity almost as long as history runs, very little has been ascertained with scientific definiteness regarding its habits and life history until recent years. Somehow the very thought of the insect and certain objectionable features that it is known to possess, such as its defensive as well as offensive odor, have deterred students from taking up the investigation of its life cycle, though its anatomy was very thoroughly studied over twenty-five years ago by Landois and others. In recent years the possibilities of the conveyance of diseases of various kinds by means of this insect parasite have been recognized and renewed interest has been aroused in everything that concerns it. For example, in smallpox epidemics, the spread of the disease through cheap lodging houses is more fre-

quent than through any other means, and the houses in which bedbugs are found seem to furnish a steady supply of victims. This impression was renewed during the recent epidemic of smallpox throughout the United States and Canada. On at least one occasion tubercle bacilli have been found in the blood of the bedbug, and, as in this case a brother of the patient, who had occupied the same bed, had died from tuberculosis, and another brother suffered from a severe and rapidly running form of the same disease, there was more than a suspicion that this parasite was a distributing agent for the disease. There is a definite tradition in Russia frequently repeated by Professor Metchnikoff, in his lectures at the Pasteur Institute, that the bedbug forms an intermediate host or is at least an agent for conveying intermittent fever, so common in certain districts of that country. Its possibilities in the rôle of intermediary in cerebrospinal meningitis are still the subject of investigation.

In these circumstances all possible information with regard to the pest is interesting, and consequently a leaflet issued by the Department of Agriculture should attract attention. This pamphlet is written by Dr. Girault, who has carefully followed the life history of cimex or clinocoris, as the insect is variously called in scientific nomenclature, and has found important new material with regard to its feeding habits. The adult insect feeds about once in from thirty-six to forty-eight hours, taking nearly fifteen minutes to get its fill of blood. At earlier ages the feeding period is much shorter. Except in susceptible human beings who have a decided idiosyncrasy, no local effect at all is produced by the feeding process. Some individuals, however, suffer from almost intolerable itching and have a series of urticaria-like lesions. The parasite is so prevalent in certain parts of the country, however, that it is evident that those with an idiosyncrasy are comparatively rare. The insect may live from five to ten weeks or even longer without any food. This is especially true during the winter, when, if they have no food, they go into a sort of comatose condition. While each insect seems to live not longer than about 100 days at the outside, some have been known to exist as long as eight months; and it is these that enable the species to continue its existence even under unfavorable circumstances, so that they live from season to season in lumber camps, summer residences, empty apartments and the like.

Another interesting phase of investigation with regard to the bedbug and its connection with disease was carried on by Drs. Girault and Strauss as to whether or not the insect had other host relations besides those with the human race. As is easily understood, the host relations of this insect are greatly increased in importance because of their scope in the potential transmission of disease if they attack other animals than man. It has been found experimentally that at least mice, both living and dead, are attacked by bedbugs and that young mice particularly seem to provide an excellent supply of food for them. This observation has been confirmed by observations made by Drs. Girault and Strauss, and, as it seems not unlikely that other small animals, including even rats, may also be hosts, the spread of such affections as pest, mouse septicemia and the like by means of this parasite must be taken into account. In a word, a new department of disease etiology seems to be opened up by these observations.

THE NATURE OF ECLAMPSIA.

Eclampsia has been designated the "disease of theories." Because of the large number of hypotheses advanced to explain this condition, we infer that none is adequate, and such, indeed, appears to be true. In early times eclampsia was looked on as a disorder of the nervous system manifesting itself by a proneness to convulsions due to a less stable equilibrium of the nervous centers during pregnancy. Lever identified eclampsia with uremia. Spiegelberg said that the occurrence of ammonium carbonate in the blood was responsible for the convulsions. The Traube-Rosenstein theory explained eclampsia as a result of edema and anemia of the brain. Bacterial infection has been held as the etiologic agent by many, especially by the French, and several organisms, isolated from cases of eclampsia, have been described. Perhaps an equal number of observers have obtained negative results in this respect, and this fact, together with the lack of uniformity in the positive findings, leave this theory unsupported by direct proof. Riviere's theory of autointoxication was, for a time, considered favorably by many. He claimed, and this was substantiated by others, that during pregnancy there occurred in the blood an accumulation of a toxic substance, while coincident with this the urine became less toxic. Later work by Volhard, Stewart and others demonstrated the fallacy of these results. Others claim to have found substances such as leucomains and large amounts of globulin in the blood serum; these findings also lack confirmation.

The fetal origin of the possible causal toxic substance has been much discussed of late. The fact that lesions identical with those of the mother have been found in the fetus, together with the occurrence of convulsions in the child after birth, have been used as an argument in favor of this idea, but, as Williams states, the evidence does not indicate whether the toxins pass from the fetus to the mother or in the opposite direction.

The clinical manifestations and the morbid anatomy indicate that in all probability there is some toxic substance in the circulation which gives rise to the familiar degenerative changes found in the liver and kidneys and often in other organs. At least from what we know concerning the causation of such lesions as thromboses in the liver, necrotic changes in this and other organs, acute nephritis and the like, these changes are more rationally explained on this hypothesis than on any other. Wells[1] recently attempted to explain several conditions

1. THE JOURNAL, Feb. 3, 1906.

closely related in their morbid anatomy, namely, chloroform poisoning, acute yellow atrophy, phosphorus poisoning, septicemias and puerperal eclampsia, by assuming an inhibitory action of the toxic substances in these diseases on the synthetic processes, but not on the autolytic processes of the liver, thus producing the destructive changes seen in this organ. Up to the present, however, it must be admitted that the source, nature or even presence of such a toxic body in eclampsia rests largely on a hypothetical basis. Experimental evidence is almost totally lacking.

On this point Liepmann of Berlin[2] claims to have been successful in demonstrating the presence of a toxin in the placentæ of eclamptics which is not present in the normal placenta. In order to show this, he dries the placenta and, after reducing it to a powder, injects a suspension of this in salt solution intraperitoneally into rabbits. The results indicate marked differences in the toxicity of eclamptic and normal placentæ. This toxin, he says, is extremely labile, highly toxic for rabbits, is firmly bound to the albumin molecule, and it has not been possible thus far to isolate it by chemical means. The placenta appears to be its place of origin, and from here the poison is distributed throughout the body. Experimentally, he has shown that the toxic substance, like tetanus toxin, has a marked affinity for the brain substance and, by contact with this tissue in a test-tube for a time, the toxic property is destroyed or neutralized. Likewise the liver retains considerable quantities of this toxin, as shown by its increased toxicity for animals. The changes in the kidneys are explained purely as secondary results produced by the circulating poison.

This experimental work appears to bear out what has been suspected for a long time, namely, the presence of a toxin with more or less specific effects on the brain, liver and kidneys. The work, if confirmed, of course, marks an advance in that it definitely localizes the origin of the poison. How or why it originates, its character, whether leucomain, bacterial toxin, or what, is not discussed, these questions being in the field of pure speculation as yet.

Evidently the proper therapeutic means in these cases, reasoning from the above facts, would be immediate delivery, and, as it has been demonstrated that in general this method is more efficient in the treatment than the expectant method, this may be used as further support of the theory of the placental origin of the disease.

THE PURE FOOD BILL.

We reproduce on page 815 the Pure Food Bill as amended by the House Committee on Interstate and Foreign Commerce. While it takes considerable space, the measure is such an important one that, we believe, our readers will be glad to see it in its completeness. It will be noticed that it is the Senate Bill, and not the Hepburn bill as introduced in the House some time ago. In the bill as it passed the Senate, provisions were made for foods, liquors and drugs, but as amended only two classes appear, foods and drugs, liquors being classed with foods. Drugs are so defined as to take in not only those in the Pharmacopeia and National Formulary, but also "any substance or mixture of substances intended to be used for the cure, mitigation or prevention of disease of either man or other animals." Mixtures require "a statement on the label of the quantity or proportion of any alcohol therein, or of any opium, cocain or other poisonous substances." This provision, of course, only affects the dangerous preparations; the fraudulent and those which contain substances which are deleterious when used for a length of time are not affected. The provision to check the dangerous preparations, however, is a long step forward, and is probably all that could be had at the present time.

The clauses affecting liquors have been modified to pacify the blenders so that they can, with certain limitations, continue their nefarious practice of making imitation whiskey, and the opposition of the whiskey trust will not be so bitter as before.

The most dangerous amendment, on its face, seems the most laudable. It is that which provides for a board of experts to determine the standard of any preparation; that is, for instance, if a certain preparation contains preservatives, it would be the function of this board to determine whether or not such preservatives are dangerous. This committee is to consist of five specialists, a toxicologist, a physiologic chemist, a bacteriologist, a pathologist and a pharmacologist. The provision will be found in Section 9. It will be noticed that in the first part of this section the Secretary of Agriculture is given authority to call on the committee on food standards of the Association of Official Agricultural Chemists and the committee on standards of the Association of State Dairy and Food Departments "and such other experts as he may deem necessary." In that which follows to the end of the section comes the danger. It will be noticed that any manufacturer can demand that his product be referred to this special board of experts; that the decision of this board is final, and that there is no appeal to the courts or to the Secretary of Agriculture, and that the board is responsible to no one. Neither is any discretion left to the Secretary of Agriculture to add to or to change the committee.

We hope our readers will look at this carefully and, if they are at all interested, we trust they will write to their congressman in regard to this particular provision. There is no objection to such a board, provided it is to aid the Secretary of Agriculture in coming to a decision, the same as it provided when he calls for the aid of the other committees referred to above.

If this amendment is allowed to stand as it is, it very seriously weakens the bill. It lessens the responsibility

2. Münch. med. Wochft., Nos. 15 and 51, 1905. Abstracts in THE JOURNAL, page 1888 of vol. xliv, and 761 of current volume.

by placing it in the hands of several men; it gives a splendid chance for the manufacturer to bring influence to bear, for it is well known that the greater the number the less the responsibility on each individual and the more opportunity for influence. We believe, however, that this particular provision will be modified when the attention of the House is directed to its danger.

"THE PHARMACOPEIA FETISH AND OTHER THINGS."

In its issue for March 10, under the above caption, the *Medical Record* comments on the papers, and the discussion following, presented at a medical meeting in Boston last January. It sadly abuses Dr. Billings,[1] who read the principal paper, but it does not reprint for the benefit of its readers what Dr. Billings said, since it could quote scarcely a paragraph without affecting some of its advertising patrons. Dr. Billings' paper is referred to as being practically the same as the one read at Portland, whereas entirely different phases of the nostrum evil were discussed. As we printed the article last week, however, our readers can judge for themselves of the merits of the article. They can also see whether or not Dr. Billings advocated the limitation of the use of medicines to those in the Pharmacopeia.

One of those who took part in the discussion is highly praised, because "he drew a sharp line of distinction between quack medicines exploited in the lay press and the secret pharmaceutical preparations advertised only to the medical profession—a distinction which is persistently ignored, to the detriment of pharmaceutical reform, by THE JOURNAL of the American Medical Association and its Council on Pharmacy and Chemistry." We regret that this allegation—so far as it refers to us—is correct. It is too bad, but we are not able to draw "a sharp line of distinction" between "patent medicines" and "the secret pharmaceutical preparations advertised only to the medical profession." We certainly can not draw this line, unless the *Medical Record* admits "patent medicines" to its advertising pages, which, of course, must not be thought of for a minute. And yet, as we turn to the advertising pages, we find Scott's Emulsion, Antikamnia, Syrup of Figs, Pond's Extract, Hydrozone, etc. When a nostrum is advertised to the public, we usually designate it as a "patent medicine," but when it is advertised in "ethical" medical journals we call it a "proprietary." To which class do these preparations belong? Where and what is the "sharp line" here? Kutnow's Powder, Vin Mariani and Angier's Emulsion are advertised in the lay journals in England, but we can easily see the "sharp line" here—the Atlantic Ocean. No, honestly, we can not see the "sharp line of distinction" not only as regards the method of advertising, but also as regards the general character of "secret proprietaries" and "patent medicines."

We are then given this unvarnished truth:

"If medical men will refuse to prescribe remedies the composition of which is unknown, the 'nostrum evil' will be at an end. But the physicians of this country are, as we have said before, not babies to be guided by a certain coterie of pharmacologists and therapeutic nihilists—a queer combination—whose slogan is, Back to the Pharmacopeia! and who seem to think that the way to reform the manufacturers of proprietary remedies is to class them with the makers of quack medicines."

This sounds very familiar, so much so that we are almost persuaded that it was written by a member of the Press Committee of the Proprietary Association of America. That committee tells us that if people did not want "patent medicines" they would not buy them, that the public is not made up of a pack of fools. And this all sounds so convincing, so absolutely unanswerable. But when this "argument" is used by the "patent medicine" men's press bureau the reply is made that the public is deceived and misled by the advertisements, and that the newspapers, the source of information for the people, are suborned by the "patent medicine" men and will not permit anything to appear against "patent medicines," and consequently the public is kept in crass ignorance of the actual facts and conditions. Is it possible that many medical men are also misled, because the medical journals, like the newspapers, are controlled by proprietary men? Banish the thought, at least so far as the *Medical Record* is concerned.

But, come to think of it, when the Council on Pharmacy and Chemistry showed that several of the preparations which the *Record* was carrying in its advertising pages were fraudulent, the *Record* did not inform its readers about it. And when, later, a letter containing the information was sent to the *Record,* it politely refused to publish the letter. The Commission on Anemia in Porto Rico, we are told, sent to the *Record,* for publication, a communication in which the commission gave proof that the vendor of Pepto Mangan had reprinted a part of its report, garbled in such a way as to make the ordinary reader believe that Pepto Mangan had proven satisfactory to the commission in the treatment of uncinariasis, whereas the report showed the opposite. Did the *Record* publish the communication? Not that we have seen.

Incidentally, it looks as though the *Medical Record* was not giving its readers the square deal.

One more quotation: "The *Medical Record* is heartily in favor of pharmaceutical reform, but it despairs of any progress so long as the cause is in the hands of the foolish and discordant Chicago missionaries." The word "discordant" is very good. We realize that this movement is discordant—it could not very well be otherwise.

1. We quote a sample: "Dr. Billings seems, however, to be a rather recent student of the good book [the Pharmacopeia] for he expresses sorrow that acetanilid . . . 'was made official in the last . . . Pharmacopeia,' apparently unaware that it has been official for ten years." What Dr. Billings said was that he was "sorry that acetanilid was made official in the last Pharmacopeia *as Pulvis Acetanilidi Compositus.*" He certainly knows that acetanilid was official before *as acetanilid;* his regret echoes that of Jacobi, Solis-Cohen, and many others, that the Pharmacopeia has made acetanilid official in the form of a mixture as a substitute for the nostrums of the antikamnia class.

But if the *Record* is really in favor of pharmaceutical reform, and does not like the methods that have been adopted by the American Medical Association, and which have been indorsed by medical societies all over the country, why does it not give definite reasons and suggest a better way? The *Medical Record* in favor of pharmaceutical reform? Is it possible so long as the greater part of its income is derived from such advertisements as Gray's Glycerine Tonic Comp., Pepto Mangan, Angier's Emulsion, Scott's Emulsion, Antikamnia, Kutnow's Powder, Seng, Phenalgin, Salacetin, Micajah's Medicated Uterine Wafers (a product of the Piso Consumption Cure people), Cactina Pillets, Chionia, Neurosine, Neurilla, Germiletum, Bromidia, Dioviburnia, Tongaline, Anasarcin, Pond's Extract, Sanmetto, Echthol, Iodia, Papine, Eusoma, Echitone, Ammonol, Nutrolactis, Roberts-Hawley Goat Lymph Compound, etc.? If so, in what way would it suggest that reform be instituted? It acknowledges that something should be done. Will it suggest what? If the investigation of each proprietary article by men competent to do the work, the results of this investigation to be published later, is wrong, will the *Record* suggest why?

If it is ignorance on the part of the *Record* that impels it to confuse the real issue by intimating that the movement means limiting physicians to the use of those preparations which appear in the Pharmacopeia, we will enlighten it by saying that it is mistaken in its premises. If the movement means the limitation of the use of medicines to those which appear in the Pharmacopeia, it would be very foolish to spend money in the investigation of preparations that are not in that book and in the publishing of the book to be known as "New and Non-official Remedies."

We are very glad that the *Record* has spoken. We hope it will speak again. A free discussion of this nostrum question will do good. Let us have more of it. Publicity is what is wanted. Let us give the physician a square deal, however, by publishing all the facts.

ERA OF THE PHONOGRAPH.

In one of Mr. H. G. Wells' ingenious fancies he shows up a future condition of the world's progress—a very unpleasant one it must be said—in which books have had their day and literature is perpetuated by phonographs, or what are called the "babbling machines." While no one would wish to realize the future he portrays, it is easy to see how great an advantage to a certain limited class of unfortunates would be the application of this particular feature. This point is specially suggested by Dr. George M. Gould in a communication to *Science*, in which he shows how large a world it would open up to the blind were this plan adopted, especially with the more recent improvements made in the so-called telegraphone of Poulssen, which is said to be far superior to the modern phonographs and graphophones now in common use. The suggestion is still too recent to have been thoroughly carried out, but it will be strange if we do not see some fruits of it in the adoption of such methods in the education of the blind in public institutions. The method necessarily has its limitations, and it may not entirely supplant, as he seems to think it will, the raised or embossed letter method used in books for the blind. But in any case it seems to indicate greatly enlarged possibilities of pleasure and profit for a deeply affected class.

THE BANQUET PERIL.

Several years ago THE JOURNAL had occasion to call attention to certain dangers incurred by banquet orators as specially illustrated by one or two notable instances. The dangers of public banquets do not appear to be entirely confined to those who have to undergo the cerebral congestion involved in after-dinner speeches. From time to time we hear of deaths occurring among those who took no prominent active intellectual part, and it is perhaps not too much to say that we are becoming somewhat accustomed to such casualties. In the city of Chicago alone one of the most prominent and public-spirited citizens succumbed not long since to the effects of an apoplectic attack incurred on such an occasion, and at a late Washington birthday banquet at one of the leading clubs two prominent citizens had to be carried out, one of whom has since died. There seems to be a sanitary question here involved that is worthy of consideration. While such serious casualties occur only among a very minute percentage of those actually present, there can be little doubt that the accompanying conditions have much to do with their production, and the question arises why they should occur at all. The participants in these banquets are men in the prime of life or past it and many of them are at a critical age or are suffering from arterial or cardiac disease and, therefore, in a physical condition favoring such accidents. They partake, however, of a hearty meal at a late and often unaccustomed hour under more or less exciting conditions, and often sit for hours in a more or less vitiated atmosphere, all of which are possible factors of sudden breakdown. In the social functions called "smokers," which have medical sanction in that medical men largely engage in them, it is easy to see how all these conditions may be aggravated. We must consider, also, that the glaringly evil effects are very probably not all that actually occur. There may be much suffering and perhaps some mortality that are really due to such occasions, though perhaps not properly credited and certainly not brought prominently before the public. The community suffers even by the loss of a very few valuable lives, and there is certainly in this matter an opportunity for medical consideration and prophylactic intervention in some way.

MODERN LONGEVITY.

According to William Curtis, the well-known newspaper correspondent, the actuaries of the large life insurance companies do not consider that the length of human life is increasing in the present conditions of our civilization. Admitting that there has been an improvement in the mortality of infants in the large centers of pop-

ulation this has not counterbalanced, in their opinion, the deteriorating influences acting on the vitality of those of riper years. Moreover, by the preservation of the weaklings in infancy the death rate in more advanced life has been increased, and this with the modern tendency to urban concentration and the intense strain of modern life has tended to decrease the average of longevity in spite of better sanitary conditions, the triumphs of medicine and surgery, the higher standards of living, and all the other conditions that might seem favorable to the prolongation of existence. While the death rate from diseases such as phthisis, and certain obviously preventable disorders like typhoid, has probably decreased, the increased mortality from heart troubles, kidney disorders, cancer and pneumonia, has more than made up the difference. It must be remembered, however, that the statistics of the large life insurance companies do not cover the whole population, but only a certain selected and provident class, and probably just that class that is most subjected to the high tension conditions of our modern civilization. It is not difficult to suppose that this class is perhaps of all others the least generally influenced by modern sanitary advances, and in making an estimate of the general average the figures it gives may be somewhat misleading, no matter how reliable they are for the special class they represent. The testimony of life insurance actuaries, however, can not be disregarded altogether as a warning against certain existing tendencies affecting the vitality of our population. Increasing luxury and speculation have much to account for what is ordinarily and superficially attributed, perhaps too exclusively, to the strenuous life. It is not hard work that kills so much as bad habits and neglect of ordinary hygienic living which no public sanitation can entirely counteract. That occupation itself is a life-saving factor is shown by the frequent rapid decline of health and early death in individuals who have retired from active business. Civilization saves the weaklings and interferes with natural selection and survival of the fittest, but it is not the struggle for life that is in itself most fatal. As a philosophic humorist has said with much truth, "Work is a snap. It is the intermissions that do up the nervous system."

A SERIOUS JOKE.

The newspapers last Sunday contained the announcement that Dr. Gregory, a member of the Legislature of Iowa, had introduced a bill authorizing the putting to death of incurables, idiots, etc. While we understand that the Doctor believes, to a certain extent, in the principles underlying the measure, he did not introduce it himself, but some other member did, more as a joke than anything else. The jokers had sent out their "story" in advance, and as a result Dr. Gregory has made himself famous. The bill was never considered seriously by the members of the Iowa Legislature and it was withdrawn, because, as our reporter remarks, its sponsors could not stand the severe criticism pouring in from all parts of the country.

Aortic Regurgitation in Childhood.—Dr. David Officer says that the cause of aortic regurgitation in children is nearly always vegetations resulting from endocarditis of rheumatic origin.—*Intercolonial Medical Journal of Australasia.*

Medical News

CALIFORNIA.

Tuberculosis Placarded.—The town of Selma has added tuberculosis to the list of diseases declared to be communicable and dangerous to the public health.

Expelled from Society.—Dr. John J. Gaynor, Eureka, was found guilty of unethical advertising and solicitation of obstetrical cases, February 13, and was expelled from the Humboldt County Medical Society by a vote of 14 to 1.

Election of Officers.—The Pomona Valley Medical Society, a branch of the Los Angeles County Medical Association, has elected Dr. Frank W. Thomas, Claremont, president; Dr. Clarence G. Toland, Pomona, secretary, and Dr. Frank Garcelon, Pomona, councilor.

Dr. Baruch Only a Volunteer.—Dr. Simon Baruch notifies THE JOURNAL that he has not taken charge of the new bathhouse at Paso Robles, as he has neither the legal authorization nor the desire to practice medicine in California. His mission is simply that of a volunteer to organize a national health resort which will pay special attention to hydrotherapy and balneology.

Annuls Action of State Board.—The Supreme Court has annulled the action of the State Board of Medical Examiners revoking the license of "Dr." Jessie C. Hewitt, Los Angeles, who advertised a cure for cancer. The court annulled the order of revocation on the ground that the medical law is vague, indefinite and uncertain.

Prohibits Distribution of Samples.—The board of trustees of Selma has passed an ordinance providing that any person who distributes samples of any patent or proprietary medicine in the town, by delivering samples or small quantities thereof to minors, or by leaving samples or quantities thereof on the streets or in the yards, or in and about any buildings of said town, or who advertises any medicine or drug of medicinal preparation, by leaving samples or small quantities thereof, where the same are likely to fall into the hands of or be picked up by any minors in said town, shall be guilty of a misdemeanor.

Personal.—Dr. Robert F. Rooney of Auburn is ill with pneumonia.——Dr. H. M. Cox has been reinstated as physician of San Luis Obispo County, vice Dr. Joseph S. Jackson.——Dr. Henry M. Fine, Oakland, has succeeded his father, Dr. Andrew Fine, as examiner for the United States pension bureau.——Dr. J. Myles Crenshaw, Redlands, has resigned as physician of San Bernardino County and his place has been filled by Dr. Paul S. Anderson, San Diego.——Dr. Eli A. Kusel has been made a member of the board of health of Oroville.——Dr. and Mrs. George M. Converse, San Francisco, will attend the International Medical Congress in Lisbon and spend several months in travel in Europe.

CONNECTICUT.

January Deaths.—During January 1,331 deaths occurred, 13 more than in December and 81 less than in January, 1905. The rate was equivalent to an annual mortality of 16.2 per 1,000. Pneumonia caused 200 deaths; diseases of the nervous system, 171; heart disease, 136; consumption, 105; accidents and violence, 179, and influenza, 41.

Infectious Diseases.—During January 562 cases of measles were reported in 62 towns; 157 cases of scarlet fever in 39 towns; 7 cases of cerebrospinal meningitis in 3 towns; 159 cases of diphtheria in 37 towns; 80 cases of whooping cough in 10 towns; 46 cases of typhoid fever in 21 towns, and 37 cases of consumption in 20 towns.

Election of Officers.—The New Haven County Medical Society has elected the following officers: President, Dr. Leonard W. Bacon, Jr.; vice-presidents, Dr. Henry W. Ring and Dr. Edward M. McCabe; secretary, Dr. Willis E. Hartshorn; treasurer, Dr. Robert E. Peck, and executive committee, Drs. Jay W. Seaver and Stephen J. Maher.

Personal.—Dr. Archibald McNeil, who has been bacteriologist of the New Haven board of health for several years, has resigned.——Dr. George S. Ford has been appointed fire department surgeon of Bridgeport, vice Dr. Elmer F. Blank.——Dr. C. Lincoln Banks has been chosen physician of the Bridgeport police department, vice Dr. J. Murray Johnson.

Illegal Practitioner Fined.—"Prof." G. Herman Lawson, Hartford, who is at present under charges for alleged violation of the medical practice act, was fined $60.70 for drunkenness, breach of the peace and assault. He is held in $200 bonds on the charge of practicing medicine without a license.——In the

case of the Hartford County Medical Society vs. M. F. Adleman for illegal practice of medicine, the defendant was adjudged guilty and was fined $100.

Donations to Hospitals.—By the will of John Weed of New York $50,000 is bequeathed to the Stamford Hospital, to found a branch hospital for the treatment of contagious diseases and to pay for the care and the treatment of the sick poor.——Mrs. Charles P. Taft of Cincinnati has given $15,000 for the enlargement of the infirmary of the hospital of Yale University.——Mrs. Julia C. Griswold has given $5,000 from the Griswold fund to endow a free bed at the Litchfield County Hospital.

ILLINOIS.

Measles and Mumps.—Argosa has an epidemic of measles, with 3 deaths.——Waukegan reports that 4 teachers and 175 school children are ill with mumps.

Eye and Ear Infirmary Staff Under Civil-Service Laws.—In an opinion rendered March 6, the attorney general holds that the medical staff, including internes, of the Illinois Charitable Eye and Ear Infirmary, Chicago, comes under the classified list. The civil-service commission was not clear on this point, as the medical staff receives no compensation.

Eye and Ear Men Meet.—A meeting of the Eastern Illinois Ophthalmological and Otological Society was held March 6 in Decatur, to complete organization, approve the by-laws and elect officers. The following officers were elected: President, Dr. James W. Sanders, Decatur; vice-president, Dr. Benjamin Gleeson, Danville, and secretary-treasurer, Dr. Charles P. Hoffmann, Danville. This society embraces the cities of Danville, Mattoon, Decatur, Champaign, Bloomington and Paxton, and has a membership of 21.

Fears Contamination of Water Supply.—On behalf of the State Board of Health, Dr. James A. Egan has filed objections to a further extension of Waukegan's sewer system emptying into Lake Michigan, unless the septic tank or other purifying method is employed. In a letter to the local board of health he states that the state board has for some time been investigating the contamination of lake water by city and factory sewerage on complaint of Lake Forest and other places to the south, whose water supply appears to have been contaminated. He characterizes Waukegan's plan to run more sewage into the lake as dangerous.

Chicago.

Hospital Will Build.—A building permit has been issued to the Chicago Union Hospital to erect a four-story brick building to cost $35,000.

Deaths of the Week.—During the week ended March 10, 607 deaths were reported, equivalent to an annual death rate of 15.44 per 1,000. Pneumonia caused 93 deaths; consumption, 76; heart diseases, 46; nephritis, 45; violence including suicide, 44, and nervous diseases, 35.

Extortion Case Settled.—In the case of Dr. F. H. Steward and John Burns, charged with being parties to a confidence game whereby $40 was obtained from Andrew Vick, the defendant Stewart returned the amount which had been paid, and the case was dismissed, at the request of the plaintiff.

Scarlet Fever Threatening.—There is an alarming increase in scarlet fever, 124 cases being reported last week as compared with 113 for the previous week and only 21 during the corresponding week of 1905. Thus far this year 84 deaths from this disease have been reported as compared with 19 during the similar period of 1905.

Care of Epileptics.—Dr. William P. Spratling, medical superintendent of the New York State Colony for Epileptics, Sonyea, delivered an address on the "Public Care of Epileptics" at a meeting held at the Chicago Woman's Club, March 14, under the auspices of the Children's Hospital Society, to advocate a movement for the establishment of a state colony for epileptics in Illinois.

MARYLAND.

Personal.—Dr. Charles M. Ellis, Elkton, president of the national bank there, and past president of the Medical and Chirurgical Faculty of Maryland, was operated on at Johns Hopkins Hospital for appendicitis by Dr. Halsted, March 8. He is doing well.

Hospital Needed for Colored Insane.—A bill has been introduced into the legislature, it is said, under the auspices of the state lunacy commission, to establish a state hospital for insane colored persons, to be known as the Third Hospital for the Insane. The bill creates a board of directors to consist of the members of the board of public works and six others to be appointed by the governor. The sum of $75,000 is appropriated for land and buildings and $25,000 a year for support.

Vital Statistics.—Dr. William L. Lewis, Kensington, health officer for Montgomery County, reports 408 births and 304 deaths during 1905. Tuberculosis caused 52 deaths; pneumonia, 30; nephritis, 19; heart disease, 16; typhoid fever, 12; malignant disease, 12, and diphtheria, 2. He notes that tuberculosis was the cause of deaths in 25 per cent. of the colored decedents and of only 7.5 per cent. of the white decedents; nearly 38 per cent. of the total deaths among negroes was due to disease of the lungs.

Baltimore.

Health Report.—The mortality from consumption (38) ran ahead of that from pneumonia (34) last week; 5 deaths were credited to whooping cough, and 6 cases of smallpox were reported.

To be Extradited.—Mrs. Emma Haslem, who jumped her bail of $1,500 about three years ago, while charged with complicity in a criminal operation, has been arrested in Minneapolis and will be brought back under extradition papers. Dr. William B. Hawkins, who was tried for the same case, is now serving a ten years' sentence in the penitentiary

Tuberculosis Fumigation.—The board of estimates has appropriated $21,000 for fumigation against tuberculosis. It will be under the direction of the health commissioner. All houses from which tuberculous patients have been moved or where they have died will be treated before they can be occupied. It is estimated that there are 2,500 houses requiring such fumigation.

Personal.—Dr. John M. T. Finney has rented a cottage at Jamestown, R. I., for the summer.——Dr. Harry Friedenwald has been re-elected president of the Baltimore branch of the *Alliance Israelite Universelle*, and Dr. Joseph Blum has been elected a director.——Dr. Edward Lindon Mellus is now in Sicily.——Dr. Albert J. Underhill was installed as fire department surgeon, March 10, vice Dr. Edward Geer, deceased.

The Harriet Lane Home for Invalid Children, founded by the late Harriet Lane Johnson, niece of President Buchanan, will be located on the Johns Hopkins Hospital grounds. The bequest amounts to several hundred thousand dollars. The home is for white children, with preference for boys and those living in Maryland, Pennsylvania and the District of Columbia. The home is to pay the cost of operating its buildings and the agreement is to run for twenty years.

MASSACHUSETTS.

Milk Dealers Fined.—Twenty-four milk dealers were recently find in Boston for selling milk not up to the required standard. Samples had been collected since January 15.

District Nurses' Work.—The District Nursing Association of Boston employs 20 nurses, of whom 15 are district nurses on regular duty. They cared for 9,212 cases last year, making 68,755 visits. There are three undergraduate assistants and two nurses working in the public schools.

Not Influenza but Typhoid.—The board of health of Medway has been sharply rebuked by Dr. Charles Harrington, secretary of the State Board of Health, for permitting the concealment of typhoid fever. Thirteen cases in one boarding house were diagnosed and treated as influenza.

Dinner to Bowditch.—Dr. Henry P. Bowditch of Harvard University Medical School was tendered a dinner by the Bowditch Club at the Copley Square Hotel, March 6, at which about fifty members were present, and at which the guest of honor was presented with a solid silver loving cup by the club.

Publication of Health Bulletin.—An act has been introduced in the legislature providing that the State Board of Health shall publish every month, in two daily papers in Boston and two daily papers in each county, a report of the analyses made by the board during the preceding month of adulterated food, drugs and liquors, stating that name and nature of the adulterated article, the name of the manufacturer, and the number of prosecutions made or begun by the board under the provisions of sections 16 to 27 of chapter 75 of the revised laws.

New Trustees.—Mayor Fitzgerald of Boston has appointed on the new board of Consumptives' Hospital trustees, who will direct the expenditure of the $150,000 appropriated July 3, 1901: Edward F. McSweeney for five years; Miss Elizabeth

A. Power for four years; Dr. James J. Minot for four years; Miss Isabel Hyams for three years; John E. Potts for two years; Dr. John F. O'Brien for two years, and Herbert F. Price for one year. A special law is before the legislature to permit this board to hire 100 beds in private institutions at $5 per week until the new hospital can be constructed and fitted for use.

What Constitutes Practice of Medicine.—Vigorous efforts are being made to secure a more definite statement in the laws of Massachusetts as to what constitutes "practice of medicine" and hence render its practitioners amenable to the State Board of Registration. Opposition to any such regulation comes from followers of Eddyism, mind cure, hypnotism, massage and the like. District Attorney Moran failed to secure the passage of his bill looking to the regulation of abortionists, recently quoted in THE JOURNAL. The osteopaths are earnestly seeking the establishment of a separate board of registration for their school.

NEBRASKA.

Physician's Office Burned.—The office of Dr. Charles O. Petty, Beaver Crossing, was destroyed by fire January 24 with a loss of $2,500.

Stricken with Apoplexy.—Dr. Benjamin F. Crummer, Omaha, former president of the Nebraska State Medical Society, was attacked with cerebral hemorrhage, March 12.

Methodist Hospital Assured.—The entire $35,000 necessary to obtain the $30,000 donation of Dr. August F. Jonas, Omaha, to the Methodist Hospital of that city, was completed March 1.

Awarded Damages.—Dr. Charles Rosewater, Omaha, on February 4, was awarded $11,000 damages against the Illinois Central Railroad for injuries received by being run down by a train on that road Jan. 2, 1904. He brought suit for $20,000, claiming permanent injuries.

Personal.—Dr. H. L. Wells, West Point, has been appointed physician of Cuming County.——Dr. Silas G. Allen, Clarkson, has been appointed coroner of Colfax County, vice Dr. Edward C. Jungbluth, Schuyler, deceased.——Dr. William R. Cornelius, Columbus, has been, for the third time, appointed physician of Platte County.

County Medical Society Election.—At the annual meeting of the Omaha-Douglas County Medical Society, Dr. Warren H. Stabaugh, South Omaha, was elected president; Dr. Richard C. Moore, Omaha, vice-president; Dr. Joseph M. Aikin, Omaha, secretary; Dr. Millard Langfield, Omaha, treasurer, and Dr. Andrew B. Somers, Omaha, member of the board of censors.

Faculty Changes.—The University of Nebraska, Medical Department, announces the following changes in the faculty: Dr. D. Francis Lee has been made professor of materia medica; Dr. Mattie Laughlin Arthur, instructor in obstetrics; Dr. Charles W. Pollard, adjunct professor of obstetrics, and Ernest Clifford Page, lecturer on medical jurisprudence. Drs. Ewing Brown and George B. Dandy have resigned.

Mortuary Statistics.—The State Board of Health reports 5,470 deaths during 1905, of which the largest number, 724, occurred in October and the smallest number, 293, in August. Heart failure is charged with 532 deaths; tuberculosis with 362; cancer with 245; apoplexy with 200; nephritis with 165; paresis with 147, and typhoid fever with 109. During the year there were 76 suicides; 43 individuals were accidentally burned to death, the same number killed by firearms, and 35 persons were drowned.

NEW YORK.

Throat Disease Prevalent.—More than a thousand persons in Yonkers are suffering from a contagious disease of the throat, having symptoms somewhat similar to those of diphtheria. It is the opinion of the health officer that the affection is due to atmospheric conditions.

Want Local Health Commissioner.—Bills were introduced into the senate and assembly creating the office of health commissioner for the Boroughs of Brooklyn and Queens, thus taking from Commissioner Darlington control of the health department in those two boroughs. The bill has the indorsement of Dr. William F. Campbell, president of the Kings County Medical Society; Dr. J. W. Fleming and Dr. J. C. Hicks.

Ulster Water Supply Near.—A bill intended to compensate the people of Ulster County against any possible loss by reason of New York City going there for water and permitting of indirect damages to real-estate owners and also compelling New York City to rebuild more than half the system of Kingston which will have to be torn up in laying New York pipes, will make it possible for both the city and the county to reach a final agreement.

Bills to Help Sick Poor.—The Assembly cities committee held hearings on March 6 on bills affecting the plans of the city for the relief of the sick poor. One was the Wedemeyer bill, which prohibits New York City from establishing a consumptive sanatorium on Staten Island. Robert W. Hebberd, commissioner of charities, spoke in behalf of the city, showing how necessary it was that the consumptives of the city should be adequately taken care of, and that local prejudice should not be allowed to interfere with this work. The hearing on the Tompkins bill authorizing New York City to establish a recreation colony for convalescents and sick persons on Long Beach developed the fact that the town of Hempstead was anxious to hold Long Beach for speculative purposes. Drs. J. W. Barnan of Bellevue and Allied Hospitals; S. S. Goldwater, superintendent of Mount Sinai Hospital, and others urge the humanitarian side of the question, and consequently the bill is to be amended to have the colony known as a recreation park under the jurisdiction of the park department.

New York City.

Harvey Society Lecture.—The thirteenth and last lecture for the year in the Harvey Society course will be delivered by Prof. W. H. Howell of Johns Hopkins University at the New York Academy of Medicine, March 17, at 8:30 p. m. Subject, "The Cause of the Heart Beat."

Personal.—Dr. Henry Russell was quite severely burned about the face and hands while trying to extinguish a fire in his office. He was taken to Roosevelt Hospital.——Dr. M. E. Lewis, interne of the first surgical division at Bellevue Hospital, is confined to his room and it is feared that he has contracted diphtheria.

Adulterated Milk.—The permit of one large dairy company was revoked by the board of health after the report of the chief sanitary inspector had been submitted. The milk was not tampered with in the country or at the stations, but at a large milk depot in this city, where chronic adulteration on a large scale was cleverly carried on.

After Doctors Who Do Not Report.—The health department is after Brooklyn physicians who do not report contagious diseases which they attend. The increase in the number of cases of measles in Brooklyn has shown that physicians are not diligent in reporting cases. It is stated that hereafter negligent physicians will have to make their explanations in court.

Special Lectures.—Dr. L. Duncan Bulkley will give four special lectures at the New York Skin and Cancer Hospital, Second Avenue and Nineteenth Street, March 21 and 28, and April 4 and 11, in the Out-patients' hall of the hospital at 4:15, on "The Principles and Application of Local Treatment of Diseases of the Skin." These lectures are free to members of the medical profession.

Can Not Stop Steam Whistles.—In regard to the complaints of residents of Riverside Drive against the blowing of whistles in the harbor and the request that additions be made to the sanitary code to allow prosecution of the offenders, the health board has decided that the present code covers the question as fully as the city can regulate it and that any further action will have to be taken by the federal government.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended March 3, 1,903 cases of measles, with 45 deaths; 475 cases of tuberculosis, with 225 deaths; 405 cases of diphtheria, with 61 deaths; 222 cases of scarlet fever, with 5 deaths; 37 cases of typhoid fever, with 7 deaths; 29 cases of cerebrospinal meningitis, with 21 deaths, and 180 cases of varicella, making in all 3,251 cases, with 364 deaths.

New Metropolitan Hospital.—At the annual meeting of the Metropolitan Hospital and Dispensary board, March 8, it was decided to purchase a site for a new building at once. The following gave $5 each: L. Leipsiger, R. F. Rudell, L. Gottlieb, C. Helborn, M. Fea herson, S. Weiner, L. D'Angello, G. A. Semel and H. G. Ramsperger and S. Uhlfelder, and in all $5,000 was subscribed. The building committee was authorized to sell the present hospital site and the woman's auxiliary was requested to obtain the necessary furnishings for the new hospital.

Raid on Spitters.—It is said that for the past three months from eight to ten arrests have been made each day for spitting, but little attention was paid to the matter, so the health department decided to call the attention of the public to this class of offenders by arresting men in the theater district. On the evening of March 8, nine arrests were made in the lobbies of theaters and the offenders held in $500 bail for appearance in court. Only a few were fined, as it was held that the theater lobbies were public places within the meaning of the sanitary code and that cuspidors should have been provided.

Nurses and Hospitals Criticised.—At the meeting of the alumni of Bellevue Hospital Medical College at the Yale Club, Dr. W. Gilman Thompson was especially severe on the nurses, stating that the profession was in the hands of a "nurses' trust." Other speakers on this occasion pointed out the desirability of establishing hospitals at convenient points throughout the city which could be reached readily in case of necessity. Dr. Russell Bellamy made a plea for cheaper hospital construction. Hospitals should be built like barracks, as a distinguished English physician had said, and should be burned down once in every five years and then built over again.

Warned Against Malpractice.—The postal authorities some time ago decided to start a campaign against persons guilty of malpractice in this city who advertise and use the mails for this purpose. Postoffice Inspector Snow of Boston, who recently conducted a similar campaign with success, was ordered to come to New York to take charge. He found in several papers advertisements of a character that left no doubt as to the advertiser's intent. The County Medical Society's detectives furnished, in some instances, practically legal proof. More than fifty of the best known of the advertisers were asked to call at the Federal Building and see Inspector Snow. The majority of the callers were women; all were warned, and not a few will leave the city. Some arrests may be made.

Measles and Diphtheria.—Dr. Darlington, the health commissioner of this city, has appealed to the people of New York, asking that every precaution be taken to prevent the spread of measles and diphtheria, since both diseases have been increasing rapidly in all sections of the city. In January and February there were 616 more cases and 77 more deaths from diphtheria than during the same period of last year. The record of March, 1904, when 7,000 cases were reported, will be broken unless the epidemic is curbed. In February, 6,310 cases of measles were reported, and during the first week in March, 1,899 more. Dr. Darlington has advised a generous use of antitoxin even before the examining physician has reached a decision. The report of the health department, covering a period of thirteen weeks, shows that Ellis Island is one of the most fertile spots for the breeding of disease in the city. There were 168 cases of measles taken from the island in the period above mentioned.

OHIO.

Physician Fined.—Dr. Alexander Grytza, Toledo, was fined $50 and costs, February 24, for practicing without a license.

Byron Stanton's Semi-Centennial.—Twenty professional friends and associates of Dr. Byron Stanton, Cincinnati, celebrated the fiftieth anniversary of his entrance into the medical profession, February 23, with a banquet at which a loving cup was presented to Dr. Stanton by Dr. N. Pendleton Dandridge on behalf of those present.

Want Hospital Instead of Library.—Twenty-one hundred of the citizens of Mansfield have signed petitions requesting that the Carnegie Library building, now in course of erection, be made into a city hospital and that the $10,000 already advanced by Mr. Carnegie be returned to him unless he is willing to have the building used as a hospital.

Fires.—Two fires have recently occurred in the Branch Hospital, Cincinnati.——A fire from a defective grate in the apartments of the superintendent of Longview State Hospital in Cincinnati caused a loss of $1,000.——The office of Dr. Minor M. Jacobs, Hamilton, was destroyed by fire February 14, with a loss of about $1,400, partially covered by insurance.

Academy Meeting.—At the regular meeting of the Cincinnati Academy of Medicine, March 5, the following officers were elected for the ensuing year: President, Dr. John E. Greiwe; vice-presidents, Drs. Henry W. Bettman and Ellen McCarthy; secretary, Dr. Stephen E. Cone; treasurer, Dr. Alexander G. Drury; trustees, Drs. N. Pendleton Dandridge, J. F. Hesse and Asa B. Isham; and censors, Drs. Edwin W. Mitchell, E. Gustav Zinke and David I. Wolfstein.

Appointments by the Board of Public Service, Cincinnati.—Physician to the workhouse, Dr. J. A. Flanagan, vice Dr. Otto P. Geier, salary $100 per month; physician to House of Refuge, Dr. Moses Salzer, vice Dr. F. A. Kautz, salary $37.50 per month; physician to City Infirmary, Dr. J. M. Adams, $112.50 per month; medical superintendent of the Branch Hospital for Consumptives, at $100 per month, and contagious disease expert to the health department at $75 per month, succeeding Dr. B. F. Lyle, Dr. Albert Faller.

Tuberculosis Hospital Has Waiting List.—The Cincinnati Branch Hospital has become so popular among the tuberculous poor of the city that accommodations can not be supplied for all applicants and quite a large waiting list as arisen. For the most part, those waiting are being treated at their homes, but, unfortunately, not a few have to be kept in the main building of the hospital. The failure of the board of public service to provide accommodations for the tuberculous poor, if necessary, by means of tents, is defeating the purpose for which the branch was built, the separation of the consumptives from those afflicted with other diseases, in this way preventing the spread of the disease.

Condemns Drink Cure.—The Montgomery County Medical Society, at its meeting March 2, expressed its disapproval of the exploitation by the lay press of the Oppenheimer method, which is claimed to cure drunkenness. The censors in their report noted that the exploitation of this so-called cure provided for a committee of prominent citizens which did not contain the name of a single member of the medical profession, but was made up of eight clergymen and nine other gentlemen, who presumably were not qualified to pass on the correctness or incorrectness of the claims made by the proprietors of this alleged cure. The censors advise the society to place the stamp of disapproval on this attempt of mercantile medicine to obtain a standing in the community under the cloak of charity.

Personal.—Dr. Alonzo B. Walker, Canton, has been elected president of the Union Medical Association of the sixth councilor district.——Dr. Wm. A. Dickey, Toledo, was struck by a car, February 25, and rendered unconscious.——Dr. Milton V. Cunningham has been appointed city physician of Youngstown, vice John J. Thomas.——Dr. Charles S. Hamilton has succeeded Dr. Starling Loving as dean of Starling Medical College, Columbus.——Dr. J. Hollis Ward, Vinton, is seriously ill with pneumonia at the home of his parents in Columbus.——Dr. Martin Stamm, Fremont, has been elected president of the Sandusky Medical Society, vice Dr. Robert H. Rice, Fremont, deceased. ——Dr. Edward Reinert, Columbus, was operated on for appendicitis, February 28.——Dr. Charles A. Cooperrider, Columbus, was made seriously ill by an overdose of a drug taken to relieve pain, March 4.——Dr. Charles M. Showman, North Baltimore, is seriously ill with appendicitis.

Celebrate Twenty-fifth Anniversary.—The following ten Cincinnati physicians celebrated the twenty-fifth anniversary of their graduation in Medicine, February 28: Dr. F. W. Langdon, neurologist, Miami Medical College, Cincinnati Hospital and Cincinnati Sanitarium; Dr. Frank W. Harmon, superintendent Longview Insane Asylum; Dr. Allen B. Thrasher, laryngologist, trustee of the Cincinnati Hospital; Dr. John L. Davis, medical director Union Central Life Insurance Company; Dr. Edward S. McKee, gynecologic department of the Medical College of Ohio for twenty-three years; Dr. George A. Fackler, of the staff of Cincinnati Hospital; Dr. Benjamin F. Clark, surgeon of the Big Four Railway and Cincinnati fire department; Dr. David DeBeck, ophthalmologist, Medical College of Ohio and Good Samaritan and St. Mary's hospitals; Dr. John H. Blau, practitioner of Covington, Ky.; Dr. N. Irwin Scott, practitioner of Norwood, and Dr. Adolph Grimm, practitioner of Cincinnati, and for many years in the laryngological department of the Medical College of Ohio.

PENNSYLVANIA.

Philadelphia.

Announcement.—The annual meeting of the American Society of Tropical Medicine will be held in Philadelphia, March 21.

Bequest.—By the terms of the will of the late Rev. Benjamin H. Sanderlin, the Methodist Hospital will receive $5,000 for the endowment of a free bed to be known as "the Memorial Methodist Episcopal Church bed, donated by the Rev. Benjamin H. Sanderlin and wife."

Non-Suit Accepted.—After a partial trial in Common Pleas Court No. 1, March 9, the action brought by Emil Krueger against Dr. H. Augustus Wilson to recover $10,000 damages for injuries in an automobile accident, was ended by counsel for the plaintiff suffering a voluntary non-suit.

Hospital Reports.—During February the Methodist Hospital admitted 92 patients and treated 454 new patients in the various outdoor departments.——The Polyclinic Hospital admitted 103 patients to the wards and treated 1,598 new patients in the dispensaries. In all 7,791 visits were made to the out-patient departments.

Personal.—Dr. and Mrs. J. Norman Risley are in England. ——Dr. and Mrs. Boardman Reed have returned from Europe and are now in California.——Dr. William G. Niles, resident physician in the Presbyterian Hospital, is seriously ill.——Dr. James Anders is confined to his house with influenza.——Dr. Hiram Langrehr was thrown from his bicycle, March 6, and severely injured.

Discussion on Quackery.—On March 19 the Philadelphia Medical Jurisprudence Society will discuss, "Quackery: What Are We Going to Do About It?" Hon. Champe S. Andrews, counsel of the New York County Medical Society, will deliver the opening address, and Philadelphia physicians hope that this meeting may mark the start of a movement against the horde of quacks now preying on the Philadelphia public that will equal the success of that against those of other culprits, the abortionists.

Work of Visiting Nurses.—At the annual meeting of the Visiting Nurses' Society it was reported that the number of new cases visited aggregated 2,311, and the number of old cases visited was 121, making the total number of cases visited 2,432. The number of visits paid was 38,282. The school nurses' report is as follows: The number of schools assigned, 6; number of treatments given to old cases, 6,692; number of new cases, 1,708; number of children attended at home, 476; number of visits to homes, 843. Mrs. Henry C. Lea was elected president.

Lectures and Addresses.—Dr. John B. Deaver addressed the Stillé Medical Society of the University, March 2, on "The Relation of the Physician to Modern Surgery."——Dr. Edward C. Spitzka, New York City, delivered a free public lecture on "The Brain" at the rooms of the American Philosophical Society, March 16.——Dr. M. P. Ravenel of the state veterinary board addressed the Pennsylvania State Veterinary Medical Association on "Hydrophobia" at the annual meeting in this city, March 6.——Dr. Ward Brinton, secretary of the Pennsylvania Society for the Prevention of Tuberculosis, delivered a lecture on "Consumption," March 8, at St. Ambrose's Protestant Episcopal Mission.

Health Report.—The total number of deaths reported for last week numbered 633. This is a decrease of 37 from those reported the week before, and an increase of 34 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 35; measles, 12; diphtheria, 10; consumption, 76; cancer, 13; apoplexy, 15; heart disease, 45; acute respiratory disease, 122; gastritis, 8; enteritis, 36; Bright's disease, 48; premature birth, 19; accidents, 29; marasmus, 2. There were 357 cases of contagious disease reported, with 52 deaths, as compared with 469 cases and 56 deaths in the previous week. There was a marked decrease in the cases of typhoid fever reported during the week, the number being 231 as compared with 352 reported in the previous week. The situation concerning typhoid in relation to its distribution is the same as it has been during the past six months, the bulk of the new cases being reported from wards comprising the northeastern section of the city, which receives the water supply by direct pumpage from the Delaware River. Measles is still prevalent, the number of cases this week reaching 630, or 6 more than those reported last week. Notwithstanding the large number of cases the death rate is comparatively small, 12 deaths being reported from this disease during the week.

TENNESSEE.

Attempt at Suicide.—Dr. Edward P. Gould, Chattanooga, formerly of Royal Center, while temporarily deranged from overwork, attempted suicide January 9 by cutting his throat. Fortunately, aid came in time and he has recovered.

Found Guilty of Murder.—Dr. Y. Safford Troyer, Memphis, charged with murder in the second degree on account of criminal malpractice, was found guilty February 10 and sentenced to imprisonment for ten years in the penitentiary.

Ground Broken for New College.—On March 1 the ground for the new Memphis College of Physicians and Surgeons was formally broken in the presence of the faculty and students by Dr. Maximillian Goltman. The building will cost about $60,000 and will be ready by September 1.

New Hospitals.—Lincoln Memorial Hospital, Knoxville, erected by the Tennessee Medical College at a cost of $40,000, was opened February 12. In addition to four large wards it has two private wards, an obstetrical ward, an operating pavilion, nurses' ward, etc.——Dr. William J. Matthews has opened a private hospital in Johnson City.

Society Meetings.—The Rutherford County Medical Society held its annual meeting in Murfreesboro, Dec. 6, 1905. The following officers were elected: Dr. James B. Murfree, Sr., Murfreesboro, president; Dr. James J. Rucker, Averall, vice-president; Dr. Rufus Pitts, Murfreesboro, secretary and treasurer; Dr. Enoch H. Jones, Murfreesboro, censor; Dr. V. K. Earthman, Murfreesboro, delegate to the state association, and Dr. Harry C. Rees, Murfreesboro, alternate.——The Union City Academy of Medicine was organized at that place January 26. Dr. D. M. Pierce was elected president; Dr. J. M. Rippy, vice-president, and Dr. Marion A. Blanton, secretary.——Greene County Medical Society has elected the following officers for the ensuing year: President, Dr. H. H. Ruble, Greeneville; secretary, Dr. S. Walter Woodyard, Greeneville. The society is in prosperous condition and includes in its membership the majority of the eligible physicians in the county.

Personal.—Dr. Marcus Haase, Memphis, formerly secretary of the local health board, who resigned in order to pursue his studies in Johns Hopkins and in Berlin, was given $1,200 by a number of his friends, January 14.——Dr. John C. Bell has been appointed chief sanitary inspector of the Memphis board of health, vice Dr. James L. Andrews, promoted to secretary of that board.——Dr. W. Frank Glenn has been elected president of the board of health of Nashville.——Dr. George P. Edwards, Nashville, has sufficiently recovered from his recent operation to be removed to his home.——Dr. and Mrs. E. R. Hochstetter, Ridgedale, are spending the winter in California.——Dr. E. E. Shivers has been made surgeon for the Louisville & Nashville Railway and assistant surgeon for the La Follette Coal, Iron & Railway Company at Somerville.——Dr. John R. Rathmell has been made dean of the Medical Department of Grant University, Chattanooga, vice the late Dr. Edward A. Cobleigh, and Dr. William G. Bogart has succeeded Dr. Rathmell as secretary of the faculty.——Dr. Rufus E. Fort, Nashville, has been appointed a member of the State Board of Health, vice Dr. William J. McMurray, deceased.——Dr. Thomas H. Marable, Clarksville, has been appointed local surgeon for the Illinois Central Railway Company.——Dr. William B. Rogers has been appointed president of the Memphis board of health.

TEXAS.

Medical Books for Library.—Two hundred volumes of medical books have been bequeathed to the Carnegie Library, Houston, by the late Dr. William H. Harrison, Brunner.

Malpractitioner Pardoned.—Dr. Hannah Reum, El Paso, who is serving a penitentiary sentence of two years on the charge of criminal malpractice, has been pardoned because of the critical condition of her health.

Railway Hospital at Sherman.—The management of the Frisco System has issued an order designating St. Vincent's Sanitarium, Sherman, as the general hospital for the southwestern division of the system.

Fires.—The residence of Dr. Aaron L. Jones, Prairie Dell, was destroyed by fire January 9. Very little was saved and no insurance was carried.——The building at Melissa, owned by Dr. J. E. Hunter and occupied by Dr. A. V. Rutledge, was destroyed by fire, January 20.

Smallpox.—Several cases of smallpox are reported in and around Madison.——A number of cases have been reported in San Angelo.——The public school at Frost has been closed on account of smallpox.——Six cases of smallpox are reported in the southeastern part of Comanche County.——On February 14 several new cases of smallpox were reported at Boyd.

Gift to Dr. Tabor.—Before State Health Officer Tabor left for Europe eighteen of the leading citizens of Galveston forwarded him a check for $1,000 and steamship transportation for himself and wife in token of their appreciation of the efficient work of Dr. Tabor in keeping Galveston and its trade territory free from yellow fever.

State Society Meeting.—The annual meeting of the Texas State Medical Association will be held in Fort Worth, April 24, 25 and 26. Dr. William R. Thompson is chairman of the committee of arrangements; Dr. Bacon Sanders of the subcommittee on finance; Dr. Frank D. Thompson of the subcommittee on transportation; Dr. John R. Fraser of the subcommittee on reception, and Dr. Frank D. Boyd of the committee on entertainment and place of meeting.

Personal.—Dr. J. H. Florence, quarantine officer at Brownsville, is acting as state health officer during Dr. Tabor's stay in Europe.——Dr. John W. Burns, Cuero, is visiting in New York.——Dr. William J. Matthews, Austin, is seriously ill from overwork.——Dr. Thomas W. Wiley, McKinney, has been appointed chief surgeon of the Texas, New Mexico & Pacific Railway.——Dr. Charles W. Trueheart, city health officer of Galveston, is reported to be critically ill.——Dr. William Myers, Seguin, was thrown from his buggy in a runaway accident and his hip and clavicle broken.

Medical Society Meetings.—The Tri-State Medical Society of Arkansas, Texas and Louisiana held its second annual meeting in Texarkana, Ark., December 6. The following officers were elected: Dr. Oscar Dowling, Shreveport, La., president;

Drs. Charles M. Rosser, Dallas, Texas; M. G. Thompson, Hot Springs, Ark., and Luther Longino, Minden, La., vice-presidents; and Dr. Robert H. T. Mann., Texarkana, Ark., secretary. ——The South Texas District Medical Association held its annual meeting December 13 and 14, at which the following officers were elected: Dr. D. Stuart Wier, Beaumont, president; Dr. Perry G. Swearingen, Center, censor; Dr. Jordan, Liberty, vice-president; and Dr. Albert A. Nelson, Nacogdoches, secretary and treasurer. Houston was selected as the next place of meeting.——The Seventh Councilor District Medical Society held its annual meeting in Austin, December 21, at which the following officers were elected: Dr. Joseph A. Holloway, Round Rock, president; Dr. Joseph Gilbert, Austin, secretary; and Drs. Andrew J. Sibley, Creedmore; E. Matt Thomas, Georgetown; James C. Anderson, Granger; Homer B. Hill, Austin, and S. E. Hudson, Austin, censors.——At a meeting held February 16, the Negro Medical Association of Fort Worth was organized with the following officers: Dr. Peter R. Robinson, president; Dr. W. T. Hughes, treasurer; Dr. J. M. Mosely, reporter, and Dr. Franklin W. Adams, secretary.

GENERAL.

A Moral Victory for the Ladies' Home Journal.—A jury of the Supreme Court, at Buffalo, N. Y., recently awarded the World's Dispensary Medical Association, proprietors of a "patent medicine" known as Dr. Pierce's Golden Medical Discovery, $16,000 damages in a suit for libel against the Curtis Publishing Company, publishers of the *Ladies' Home Journal*. The libel consisted in a statement that this particular medicine contained opium, digitalis and alcohol. The suit was originally brought for $200,000 damages and the award was so small that the plaintiff immediately made a motion for a new trial on the ground of inadequate damages.

Health Report of the Philippines for October.—The health report of the Board of Health for the Philippine Islands for October states that during the month 842 births were recorded, of which 452 were males and 390 females. There were 904 deaths, or an average of 29 deaths per diem. This is a lower death rate than for the two preceding months. During the month there were 31 cases of cholera, with 29 deaths. The infant mortality, especially among children included in the groups of "under 30 days," and "between 30 days and one year," reached 468. This was 62 more than during the preceding month.

FOREIGN.

Cholera Declining in Russia.—It is reported, by way of Berlin, that the Russian cholera commission has declared the Vistula district, the districts of Wolhynia and Kurland, and the City of Lomza free from cholera.

Research on Etiology of Syphilis.—A Berlin lawyer named Salomonsohn recently founded an endowment to aid scientific research. The first grant ($400) from the endowment has been given to J. Siegel, the discoverer of the *Cytorrhyctes luis*, to enable him to continue his studies on the etiology of syphilis.

Wealthy Physician Labors Among Poor.—Duke Carl Theodore of Bavaria is a well-known physician, having long made ophthalmology his specialty. He recently performed his five-thousandth cataract operation, assisted by Dr. Zenker, and by his wife, who was the Princess Maria of Portugal. She has always taken an interest in his work and frequently assists him. It is said that he never accepts a fee from any patient, devoting his services to the poor. He lives in Munich and has made many endowments for hospitals and other charitable purposes.

Smallpox in Mexico.—Consul Lespinasse reports from Tuxpam, February 7, that an epidemic of smallpox prevails in that vicinity, but that other settlements and municipalities included in the county are exempt from the disease. Since November 29, the date on which the first case of the epidemic occurred, 60 cases have been recorded. Of these patients 26 have recovered, 12 have died, and 22, most of whom will recover, are still under treatment. The measures adopted to check the course of the epidemic consist of isolation of the sick, necessary aid to the sufferers, and prompt disinfection of the houses in which smallpox patients have been treated.

Board and Lodgings at Lisbon International Medical Congress.—The executive committee sends word to THE JOURNAL that a large number of rooms, with one or more beds, have been secured for the accommodation of the members of the congress. The rates will be from 6 to 10 francs per bed (about $1.50 to $2.) Rooms with board can also be secured for 15 francs, or $3 a day for each person. A restaurant will be run in connection with the congress, and meals can also be obtained at the restaurants and hotels of the city. The rooms will be assigned in turn as the demands are received. Mr. Manoel José da Silva, Palacio Foz, Praça dos Restauradores, Lisbon, has charge of this service. The French, Spanish, Portuguese and Italian railroads allow a reduction of 50 per cent, and a change of route going and coming, on condition that the trip is by rail each way. See page 597 for further particulars; see also Correspondence Department in this issue.

LONDON LETTER.

The Amalgamation of the London Medical Societies.

Considerable progress has been made in the scheme for the amalgamation of the numerous London medical societies which has been previously described in THE JOURNAL. At a meeting of the representatives in December an organizing committee was appointed to draw up a detailed scheme. In order to ascertain the amount of financial support likely to be received a circular was issued to over 5,000 doctors, asking for an immediate reply to certain questions as to the probability of their joining the new society as fellows or members. A fellow will pay a subscription of $15 a year, which will give him the right to attend discussions in all sections, to use the general library, and to receive the proceedings and transactions of the society. A member of only a section will pay $5 a year and will have the right to take part in the proceedings of the section, to receive its publications, and to use the general reading room. Such a member will be entitled to join other sections on payment of $2.50 for each additional section, and to obtain the use of the general library for a further subscription of $5. Every member of a society joining the amalgamation who desires to become a member of the corresponding section or a fellow of the new society will be able to do so without election. It is proposed that those elected subsequently shall pay an entrance fee, and that only the members of a section shall have the power to vote on matters of the section.

The Rebuilding of the London Hospital.

Within the last few weeks the reconstruction of the largest general hospital in England has been completed at a cost of over $2,150,000. The hospital has been practically rebuilt and now presents a remarkable example of perfection in so far as a well-built structure, part of which dates from 1752, can be compared with new buildings erected regardless of the value of land. Of the sum expended at least $1,650,000 has been subscribed by the public for the purpose. The remaining $500,000 has been taken from the invested funds of the institution. The state of the hospital eight years ago amounted to a scandal. There were 780 beds and but one operating theater. The pressure on this single theater was such that the patients had to wait their turn in a fashion which amounted to absolute cruelty. Now there are eight operating theaters, five of which are in daily use, the other three being required not less than four days a week. There are now 937 beds in the hospital. Formerly the out-patient department was totally inadequate to deal with the 161,000 individual out-patients who there sought relief—a number which has now increased to 206,000. There were no proper seclusion and isolation wards. The ophthalmic cases were accommodated in a damp basement below the ground level. The arrangements for children were such that the constant outbreaks of infectious disease paralyzed the whole work.

The London School of Clinical Medicine.

The organization of the old Seamen's Hospital at Greenwich as a postgraduate school, which promises to be one of the most important in this country, has recently been described in THE JOURNAL. At a meeting of one of the branches of the British Medical Association, held at the hospital, special attention was directed to the advantages offered by it as a postgraduate school. Sir Dyce Duckworth, who presided, said that the hospital had done excellent work in the past, but during the last few months the staff had been materially increased and included members well known to the medical world at large as eminent in their several departments. He said that no institution so well equipped for the purpose had been organized in London, and was a great advance in the direction of supplying a want that had long been felt. He said that medical men from various parts of the world go to England and, not finding what existed in Germany and France, turned their backs on London and betook themselves to other countries. The hospital provided accommodation chiefly for sailors, and in connection with the School of Tropical Medicine, of which it formed part, it provided for observation splendid examples of tropical diseases—dysentery and beriberi. Thus an excellent field is provided for officers of the navy and army and for those who are fitting themselves for colonial practice.

Disease in the Port of London.

During the past two months 6,207 vessels entered the port of London and were inspected by the medical staff. Of these, 5,304 were British. Thirty-eight cases of infectious disease were dealt with, viz.: Chickenpox, 13; typhoid fever, 13; measles, 6; erysipelas, 1; scarlet fever, 1, and Malta fever, 1. Three cases of beriberi have been reported. A large quantity of unsound food was seized and destroyed at the docks and warehouses, particularly some extensive importations of beef and mutton from the River Plate and Buenos Ayres. The extermination of rats still continues. The total number destroyed so far amounts to 389,543.

Medical Legislation

The Pure Food Bill.

The following is the text of the Pure Food Bill as amended and now before the House of Representatives:

"*An Act for preventing the adulteration or misbranding of foods or drugs, and for regulating traffic therein, and for other purposes.*

"*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:*

"That the introduction into any state or territory or the District of Columbia from any other state or territory or the District of Columbia, or from any foreign country, or shipment to any foreign country of any article of food or drugs which is adulterated or misbranded, within the meaning of this act, is hereby prohibited; and any person who shall ship or deliver for shipment from any state or territory or the District of Columbia to any other state or territory or the District of Columbia, or to a foreign country, or who shall receive in any state or territory or the District of Columbia from any other state or territory or the District of Columbia, or foreign country, or who, having received, shall deliver, in original unbroken packages, for pay or otherwise, or offer to deliver to any other person, any such article so adulterated or misbranded within the meaning of this act, or any person who shall sell or offer for sale in the District of Columbia or the territories of the United States any such adulterated or misbranded foods or drugs, or export or offer to export the same to any foreign country, shall be guilty of a misdemeanor, and for such offense be fined not exceeding $200 for the first offense, and on conviction for each subsequent offense not exceeding $300 or be imprisoned not exceeding one year, or both, in the discretion of the court: Provided, however, that no person shall be liable to the penalty of imprisonment as provided herein unless he knowingly committed the offense charged: Provided further, that no article shall be deemed misbranded or adulterated within the provisions of this act when intended for export to any foreign country and prepared or packed according to the specifications or directions of the foreign purchaser when no substance is used in the preparation or packing thereof in conflict with the laws of the foreign country to which said article is intended to be shipped; but if said article shall be in fact sold or offered for sale for domestic use or consumption, then this proviso shall not exempt said article from the operation of all the other provisions of this act."

TO ESTABLISH METHODS OF PROCEDURE.

"SEC. 2. That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce and Labor shall make uniform rules and regulations for carrying out the provisions of this act, including the collection and examination of specimens of foods and drugs manufactured or offered for sale in the District of Columbia, or in any territory of the United States, or which shall be offered for sale in unbroken packages in any state other than that in which they shall have been respectively manufactured or produced, or which shall be received from any foreign country, or intended for shipment to any foreign country, or which may be submitted for examination by the chief health, food, or drug officer of any state, territory, or the District of Columbia, or at any domestic or foreign port through which such product is offered for interstate commerce, or for export or import between the United States and any foreign port or country."

METHODS OF EXAMINATIONS.

"SEC. 3. That the examinations of specimens of foods and drugs shall be made in the Bureau of Chemistry of the Department of Agriculture, or under the direction and supervision of such bureau, for the purpose of determining from such examinations whether such articles are adulterated or misbranded within the meaning of this act; and if it shall appear from any such examination that any of such specimens is adulterated or misbranded within the meaning of this act, the Secretary of Agriculture shall cause notice thereof to be given to the party from whom such sample was obtained. Any party so notified shall be given an opportunity to be heard, under such rules and regulations as may be prescribed as aforesaid, and if it appears that any of the provisions of this act have been violated by such party, then the Secretary of Agriculture shall at once certify the facts to the proper United States district attorney, with a copy of the results of the analysis or the examination of such article, duly authenticated by the analyst or officer making such examination, under the oath of such officer. After judgment of the court notice shall be given by publication in such manner as may be prescribed by the rules and regulations aforesaid."

PROSECUTIONS.

"SEC. 4. That it shall be the duty of each district attorney to whom the Secretary of Agriculture shall report any violation of this act, or to whom any health or food or drug officer or agent of any state, territory, or the District of Columbia, shall present satisfactory evidence of any such violation, to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States, without delay, for the enforcement of the penalties as in such case herein provided."

DEFINITION OF "DRUG" AND "FOOD".

"SEC. 5. That the term 'drug,' as used in this act, shall include all medicines and preparations recognized in the United States Pharmacopeia or National Formulary for internal or external use, and any substance or mixture of substances intended to be used for the cure, mitigation, or prevention of disease of either man or other animals. The term 'food,' as used herein, shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound."

DEFINITION OF "ADULTERATION".

"SEC. 6. That for the purposes of this act an article shall be deemed to be adulterated:

"In case of drugs:

"*First.*—If, when a drug is sold under the standard recognized in the United States Pharmacopeia or National Formulary, it differs from the standard of strength, quality, or purity, as determined by the test laid down in the United States Pharmacopeia or National Formulary official at the time of the investigation.

"*Second.*—If its strength or purity differ from any other professed standard or quality under which it is sold.

"In the case of confectionery:

"If it contain terra alba, barytes, talc, chrome yellow, or other mineral substance or poisonous color or flavor, or other ingredient deleterious or detrimental to health.

"In the case of food:

"*First.*—If any substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength.

"*Second.*—If any substance has been substituted wholly or in part for the article.

"*Third.*—If any valuable constituent of the article has been wholly or in part abstracted.

"*Fourth.*—If it be mixed, colored, powdered, coated, or stained in a manner whereby damage or inferiority is concealed.

"*Fifth.*—If it contain any added poisonous or other added deleterious ingredient which may render such article injurious to health: Provided, that when in the preparation of food products for shipment they are preserved by an external application applied in such manner that the preservative is necessarily removed mechanically, or by maceration in water, or otherwise, the provisions of this act shall be construed as applying only when said products are ready for consumption.

"*Sixth.*—If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter."

DEFINITION OF "MISBRANDING".

"SEC. 7. That the term 'misbranded,' as used herein, shall apply to all drugs, or articles of food, or articles which enter into the composition of food, the package or label of which

shall bear any statement regarding the ingredients or substances contained in such article, which statement shall be false or misleading in any particular, and to any food or drug product which is falsely branded as to the state, territory, or country in which it is manufactured or produced.

"That for the purposes of this act an article shall also be deemed to be misbranded:

"In case of drugs:

"*First.*—If it be an imitation of or offered for sale under the name of another article.

"*Second.*—If the contents of the original package shall have been removed, in whole or in part, and other contents shall have been placed in such package, or if it fail to bear a statement on the label of the quantity or proportion of any alcohol therein, or of any opium, cocain, or other poisonous substance which may be contained therein.

"In the case of food:

"*First.*—If it be an imitation of or offered for sale under the distinctive name of another article.

"*Second.*—If it be labeled or branded so as to deceive or mislead the purchaser, or purport to be a foreign product when not so.

"*Third.*—If in package form, the quantity of the contents of the package be not plainly and correctly stated in terms of weight or measure, on the outside of the package.

"*Fourth.*—If the package containing it or its label shall bear any statement, design, or device regarding the ingredients or the substances contained therein, which statement, design, or device shall be false or misleading in any particular: Provided, that an article of food which does not contain any added poisonous or deleterious ingredients shall not be deemed to be adulterated or misbranded in the following cases:

"*First.*—In case of mixtures or compounds which may be now or from time to time hereafter known as articles of food, under their own distinctive names, and not an imitation of or offered for sale under the distinctive name of another article, if the name be accompanied on the same label or brand with a statement of the place where said article has been manufactured or produced.

"*Second.*—In the case of articles labeled, branded, or tagged so as to plainly indicate that they are compounds, imitations, or blends: Provided, that the term blend as used herein shall be construed to mean a mixture of like substances, not excluding harmless coloring or flavoring ingredients: And provided further, that nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods which contain no unwholesome added ingredient to disclose their trade formulas, except in so far as the provisions of this act may require to secure freedom from adulteration or misbranding."

PROTECTION OF THE RETAILER WHO HAS GUARANTEES.

"SEC. 8. That no dealer shall be convicted under the provisions of this act when he is able to prove a guaranty of conformity with the provisions of this act in form approved by the rules and regulations herein provided for, signed by the manufacturer or the party or parties from whom he purchased said articles: Provided, that said guarantor resides within the United States. Said guaranty shall contain the full name and address of the guarantor making the sale to the dealer, and said guarantor shall be amenable to the prosecutions, fines, and other penalties which would otherwise attach in due course to the dealer under the provisions of this act."

COMMISSION OF EXPERTS.

"SEC. 9. That it shall be the duty of the Secretary of Agriculture to fix standards of food products when advisable for the guidance of the officials charged with the administration of food laws and for the information of the courts, and to determine the wholesomeness or unwholesomeness of preservatives and other substances which are or may be added to foods; and to aid him in reaching just decisions in such matters he is authorized to call on the committee on food standards of the Association of Official Agricultural Chemists and the committee of standards of the Association of State Dairy and Food Departments, and such other experts as he may deem necessary.

"And on request made to the Secretary of Agriculture prior to reaching any decision as provided for in this section, by any manufacturer or other person interested, asking for the appointment of a board to determine the wholesomeness or unwholesomeness of any preservative or other substance which is or may be added to foods, and concerning the use of which the person making the request has an interest, it shall be the duty of the Secretary of Agriculture to appoint a board of disinterested experts, which board shall consist of five members, one of whom shall be an expert toxicologist, one an expert physiologic chemist, one an expert bacteriologist, one an expert pathologist, and one an expert pharmacologist, which board shall meet at the city of Washington, District of Columbia, or elsewhere, at the call of the Secretary of Agriculture, and pass on such question after proper notice and hearing granted to the person making such request. The compensation of the members of such board shall be fixed by the Secretary of Agriculture."

HOW SAMPLES MAY BE PROCURED.

"SEC. 10. That every person who manufactures or produces for shipment and delivers for transportation within the District of Columbia or any territory, or who manufactures or produces for shipment or delivers for transportation from any state, territory, or the District of Columbia, to any other state, territory, or the District of Columbia, or to any foreign country, any drug or article of food, and every person who exposes for sale or delivers to a purchaser in the District of Columbia or any territory any drug or article of food manufactured or produced within said District of Columbia or any territory, or who exposes for sale or delivers for shipment any drug or article of food received from a state, territory, or the District of Columbia other than the state, territory, or the District of Columbia in which he exposes for sale or delivers such drug or article of food, or from any foreign country, shall furnish within business hours and on tender and full payment of the selling price a sample of such drug or article of food to any person duly authorized by the rules and regulations herein provided for to receive the same, and who shall apply to such manufacturer, producer, or vendor, or person delivering to a purchaser, such drug or article of food, for such sample for such use, in sufficient quantity for the analysis of any such drug or article of food in his possession.

"SEC. 11. That any manufacturer, producer, or dealer who refuses to comply, on demand, with the requirements of section ten of this act shall be guilty of a misdemeanor, and on conviction shall be fined not exceeding $100, or imprisoned not exceeding 100 days, or both. And any person found guilty of manufacturing or offering for sale, or selling, an adulterated, or misbranded article of food or drug in violation of the provisions of this act may, in the discretion of the court, be adjudged to pay, in addition to the penalties hereinbefore provided for, all the necessary costs and expenses incurred in inspecting and analyzing such adulterated articles which said person may have been found guilty of manufacturing, selling, or offering for sale."

LIMITED TO INTERSTATE COMMERCE.

"SEC. 12. That this act shall not be construed to interfere with commerce wholly internal in any state, nor with the exercise of their police powers by the several states; but foods and drugs fully complying with all the provisions of this act shall not be interfered with by the authorities of the several states when transported from one state to another so long as they remain in original unbroken packages, except as may be otherwise defined by law or provided by statutes of the United States."

SEIZURE OF GOODS.

"SEC. 13. That any article of food or drug that is adulterated or misbranded within the meaning of this act, and is transported or being transported from one state to another for sale, or if it be sold or offered for sale in the District of Columbia or any territory of the United States, or if it be imported from a foreign country for sale, or if intended for export to a foreign country, shall be liable to be proceeded against in any district court of the United States, within the district where the same is found, and seized by a process of libel for condemnation. And if such article is condemned as being adulterated or misbranded, within the meaning of this act, the same shall be disposed of as the said court may direct, and the proceeds thereof, if sold, less the legal costs and charges, shall be paid into the treasury of the United States, but such goods shall not be sold in any state contrary to the laws of that state. The proceedings of such libel cases shall conform as near as may be to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in such case; and all such proceedings shall be at the suit of and in the name of the United States."

TO EXAMINE GOODS FOR EXPORT.

"SEC. 14. That the Secretary of Agriculture is authorized to investigate the character and extent of the adulteration of foods and drugs, and whenever he has reason to believe that articles are being imported from foreign countries which by reason of such adulteration are dangerous to the health of the

people of the United States, or are of kinds which are forbidden entry into or forbidden to be sold or restricted in sale in the countries in which they are made or from which they are exported, or which shall be falsely labeled in any respect, either by the omission of the name of any added ingredient or otherwise, or in regard to the place of manufacture, or the contents of the package, shall make a request on the Secretary of the Treasury for samples from original packages of such articles for inspection and analysis; and the Secretary of the Treasury is hereby authorized to open such original packages and deliver specimens to the Secretary of Agriculture for the purpose mentioned, giving due notice to the owner or consignee of such articles, who may appear before the Secretary of Agriculture and have the right to introduce testimony; and the Secretary of the Treasury shall refuse delivery to the consignee of any of such goods which the Secretary of Agriculture reports to him have been inspected and analyzed and found to be any of the kinds mentioned in this section: Provided, that the Secretary of the Treasury may deliver to the consignee such goods, pending examination and decision in the matter, on execution of a penal bond of the full invoice value of such goods, together with the duty thereon, and on refusal to return such goods for any cause to the custody of the Secretary of the Treasury, when demanded, for the purpose of excluding them from the country, or for other purposes, said consignee shall forfeit the full amount covered by the bond.

"SEC. 15. That the term 'territory' as used in this act shall include the insular posessions of the United States.

"SEC. 16. That this act shall be in force and effect from and after its passage: Provided, however, that no penalties herein named shall be imposed until after the expiration of one year from the passage of the act."

To Investigate the Proprietary Association.

The following resolution, introduced into the House of Representatives March 5, 1906, by Mr. Gillespie, was referred to the committee on judiciary and ordered to be printed. The possibilities involved in an investigation of the bodies mentioned are interesting.

WHEREAS, It is alleged that John W. Jennings, a citizen of the United States, engaged in the sale of drugs, chemicals, patent medicines and proprietary articles at wholesale and retail at number eleven hundred and forty-two Connecticut Avenue and number eleven hundred and thirty-nine Eighteenth Street, in the city of Washington, District of Columbia, is being conspired and discriminated against by certain combinations, in violation of the Act of Congress of July second, eighteen hundred and ninety, entitled "An Act to protect trade and commerce from unlawful restraints and monopolies," namely: The Proprietary Association of America, an unincorporated association composed of upward of ninety per centum of all the manufacturers and proprietors of patent medicines, drugs, chemicals, and proprietary articles within the United States, whose members reside and do business in the several states of the United States; The National Wholesale Druggists' Association, an unincorporated association composed of upward of ninety per centum of all the wholesale druggists of the United States, whose members are the distributing agents for manufacturers and proprietors of patent medicines, drugs, chemicals and proprietary articles, purchasing the same from manufacturers in the several states of the United States and in foreign markets, and selling and supplying the same to retail druggists throughout the United States; The National Association of Retail Druggists, briefly known as the N. A. R. D., an unincorporated association having a membership composed of local associations of retail druggists and other kindred associations; and

WHEREAS, It is alleged that the aforesaid Jennings, by reason of his non-affiliation with the District of Columbia Retail Druggists' Association, the local branch of the aforesaid N. A. R. D., has been for several years past and is now blacklisted, and thereby prevented from buying in open market any drugs, patent medicines, chemicals and proprietary articles manufactured or controlled by the members of the aforesaid associations; and

WHEREAS, It is alleged that the said discrimination and blacklisting have resulted in heavy financial loss to the aforesaid Jennings and threaten the ruin of his business; and

WHEREAS, It is alleged that the aforesaid Jennings, on Feb. 15, 1905, filed before the Department of Justice a petition setting forth the aforesaid grievances; and

WHEREAS, It is alleged that up to the present time no action has been taken by the Department of Justice on the aforesaid petition: Therefore be it

Resolved, That the Attorney-General of the United States be, and he is hereby, requested, if not incompatible with the public interest, to report to the House of Representatives at his earliest convenience for its guidance, all the information within the knowledge of his department which shows or tends to show that there exists now, or within the past twelve months has existed, a combination or arrangement between the wholesale and retail druggists and manufacturers of patent medicines, drugs, chemicals and proprietary articles, whereby a druggist not a member of one of the aforesaid associations has been or is now being discriminated against in violation of the Act passed July 2, 1890, entitled "An Act to protect trade and commerce from unlawful restraints and monopolies," or acts amendatory thereof; also what steps have been taken by the Department of Justice looking to the prosecution of the petition of the aforesaid Jennings, filed before the department on February 15, 1905, as herein above set forth.

New Jersey Committee on Legislation.

WILLIAMSTOWN, N. J., March 2, 1906.

To the Editor:—I am inclosing a list of the National Auxiliary Legislative Committee of the state of New Jersey. This committee has been named at the suggestion of Dr. Reed, chairman of the National Committee on Legislation, so that each state should be thoroughly organized, and the National Committee on Legislation should be able to reach every county in each state.

We are trying to take up the work and to do everything in our power to assist the National Committee on Legislation, and at the same time to look after matters in our own state. We have a State Auxiliary Legislative Committee, which is composed of one member from each county medical society, and we are getting in close touch with the profession's demands throughout the state.

The "patent-medicine" bill has been introduced in our legislature and we are going to do everything that is possible to pass the bill.

We have taken up all the matters as suggested at the conference of the National Legislative Committee, with our senator and congressmen, and in most cases have received responses from them that they are ready to co-operate with us on all matters which we discussed at the meeting of the National Legislative Council.

New Jersey is, I think you will find, ever ready to do her part and to assist in any way possible for the advancement of the medical profession on sanitary matters.

L. M. HALSEY, Chairman.

LIST OF THE NATIONAL AUXILIARY, LEGISLATIVE COMMITTEE OF NEW JERSEY.

Atlantic County	Dr. Edgar Darnell	Atlantic City
Bergen County	Dr. D. A. Currie	Englewood
Burlington County	Dr. W. P. Melcher	Mt. Holly
Cumberland County	Dr. J. H. Moore	Bridgeton
Camden County	Dr. Daniel Strock	Camden
Cape May County	Dr. M. F. Lummis	Holly Beach
Essex County	Dr. Ralph H. Hunt	29 Harrison St., E. Orange
Gloucester County	Dr. Geo. C. Laws	Paulsboro
Hudson County	Dr. Samuel A. Helfer	Hoboken
Mercer County	Dr. Elmer Barvis	Trenton
Middlesex County	Dr. David C. English	New Brunswick
Monmouth County	Dr. D. McLean Forman	Freehold
Morris County	Dr. H. W. Kice	Wharton
Ocean County	Drs. L. C. Lindlay and W. G. Schauffler	Lakewood
Passaic County	Dr. John L. Leal	Paterson
Salem County	Dr. W. H. Carpenter	Salem
Somerset County	Dr. John P. Hecht	Somerville
Sussex County	Dr. M. D. Hughes	Layton
Union County	Dr. N. L. Wilson	Elizabeth
Warren County	Dr. John C. Johnson	Blairstown

Correspondence

Interstate Reciprocity.

DETROIT, March 10, 1906.

To the Editor:—Dr. George W. Webster states in reply to my letter in THE JOURNAL, March 3, 1906, in which I interpret his proposed plan of action to make practical his basis of reciprocity as in conflict with the authority and purposes of state medical boards, and in which also I suggest that his committee could be effective from a standpoint of education working in harmony with the Association of American Medical Colleges—as follows:

> "I regret very much that Dr. Harison seems to have utterly failed to grasp the fundamental ideas which I tried to convey, namely: that the American Medical Association is desirous of assisting the examining boards, and that the plan proposed is not simply a scheme of reciprocity but a proposed plan of education, which, if successfully carried out, will serve as a rational foundation on which reciprocity will naturally rest."

A careful review of his article failed to find even a direct or indirect reference to the medical boards as a factor in his plan to make practical the accepted basis of reciprocity, but I do find the unequivocal statements that the basis of reciprocity can only be made effective through the Council on Education of the American Medical Association. As corroborative evi-

dence of his intent may be mentioned his ignoring completely the existence of the American Confederation, which is in complete and effective possession of the field which he proposed to operate and improve. If Dr. Webster were simply desirous of assisting the medical boards and had proposed a plan of education only, he should not have ignored the two most important factors—medical boards, represented by the American Confederation, and the medical colleges, represented in a large degree by the Association of American Medical Colleges. I am pleased, however, to accept without further reservation, his statement that the Council on Medical Education proposes to limit its endeavors to the educational phase of the question.

In reference to that portion of Dr. Webster's reply which deals principally with himself and his personal achievements and services to the profession and to the causes of educational reciprocity, I have to say that I fully appreciate and gladly credit Dr. Webster's great ability as well as his activity in all matters pertaining to the good of the profession, and the objects it has in view, but I am not prepared to go the length of supporting him in his contention that either he or the National Confederation are the authors of the present method of standard adopted by the Association of American Medical Colleges, or by the American Confederation. He states that in 1903, and again in 1904, the National Confederation of State Medical and Licensing Boards adopted his standard curriculum, and that this curriculum, which assigned a certain number of hours in the course to each subject, was the first curriculum to be adopted by any organization, and that it was subsequently adopted by the Association of American Medical Colleges and the American Confederation without any important modifications. Is his statement based on facts? As early as July, 1900, the Michigan State Medical Board published and enforced an itemized medical standard, divided into lectures, teaching, and laboratory work, and in June, 1902, published a further itemized standard of both preliminary and medical education, the latter divided into lectures, laboratory, and clinics, while Dr. Webster's standard of three years later contains simply the total number of hours for each subject, without division into lectures, laboratory, and clinics, and therefore was a much less developed method, and possessed nothing of the Michigan original, except in its crudeness.

In 1904 the American Confederation adopted the Michigan method of standard, both of preliminary and medical education, but postponed the final adoption of the detail until subsequent to the 1905 meeting of the Association of American Medical Colleges, in order that the standards of the Confederation of Boards and the Association of Colleges should harmonize.

As a member of, and secretary of the confederation committee in charge of the standards, I can state that Dr. Webster's curriculum was not considered by the committee, or even known to have an existence. The committee of the Association of American Medical Colleges, of which Dr. Kober was chairman, in its printed report, which was adopted, presented in parallel columns the proposed standard of 4,000 hours, divided into lectures, laboratory, and clinics (exactly in harmony with the Michigan method) and the Michigan standard of 4,000 hours. With some slight variation in the detail of hours per subject these standards were exactly uniform.

Looking up the last two or three years' official report of the Association of Medical Colleges I find frequent reference to the Michigan standard and method, but no reference to Dr. Webster's curriculum, or the National Confederation. If those interested could see in print, for comparison, the curriculum of the National Confederation of 1903 and 1904, which Dr. Webster claims as his offspring, and the standard curriculum of the Association of American Medical Colleges, and also the Michigan curricula of each year since 1900, which have been incorporated in her application forms since 1902, the fallacy of Dr. Webster's claim of originality would be fully appreciated. Especially so in connection with his statement made at the Portland session last years, as follows:

> "Dr. G. W. Webster of Illinois said that while there had been much talk of raising the standard no real standard has as yet been established."

As an additional evidence of inconsistency in Dr. Webster's claim might be mentioned the fact that the state board of which he is president, and its most influential member, has as yet failed to adopt the method of standard which he states was originated by him in 1903, and which was actually in practical use in Michigan three years prior to this date.

In connection with the above I also desire to refer briefly to the published letter of commendation received by Dr. Webster from Dr. George M. Kober, in which it would appear that the latter indorses his claim that he alone of all others deserves credit for the standard curriculum, which at a later date Dr. Webster denies exists.

I am pleased to note that Dr. Webster, like the rest of us, is subject to the human weakness of appreciating credit for personal good works. I also received an almost similar letter from Dr. Kober, with this difference, perhaps—the one letter was based on the belief and kindly appreciation for services attempted; the other on fact. While such letters are usual, proper, and often helpful, it was never contemplated by their author that they should be used in the manner Dr. Webster used the one received by him. They should never be taken too seriously or literally by the fortunate recipients, besides, such letters are not material to the cause which Dr. Webster and myself have at heart, and the methods of obtaining which we are now agreed on. Indeed, the discussion seems to have been diverted from the original subject of reciprocity to one of personal claims and credit, for which I do not hold myself responsible.

B. D. HARISON.

Lisbon and Its People.—Some Interesting Facts for Those Attending the International Congress.

BALTIMORE, March 1, 1906.

To the Editor:—Having received numerous letters of inquiry regarding Lisbon and its people I take this opportunity to give a few facts to those who are to attend the congress. Being well acquainted with the people of Portugal, I regret that I can not do them greater justice, but material for a medical journal has its limits.

Contrary to the general opinion, Portugal differs sensibly from Spain in its social, intellectual and moral life. Ethnographically the inhabitants of the two countries are the same race, but apart from this there is a great difference between the two races.

The primitive traits of the Portuguese have been changed by long series of mixtures between the original inhabitants and foreigners. This amalgam, which was produced during and directly after Portugal's great geographical discoveries, has brought about a physiognomic difference which is noticeable the moment the traveler reaches the Spanish-Portuguese frontier.

Throughout Portugal the national type remains the same, but the mode of life, costumes, habits and morals vary in different parts of the country. These differences are distinct; for instance, the Minhotos are cultivators of the soil, intelligent and serious in their work, but on fête days they are gay, joyous and great admirers of pretty women and jewelry. The grape pickers and winegrowers of Douro, the inhabitants of the Beira, sometimes shepherds, sometimes fishermen, are hard workers, but their tasks finished they enjoy themselves in sports and drinking. The mountaineers are a strong, virile race with meditative manners and austere morals.

One feature, however, is characteristic of all Portugal. This is the beautiful, brilliant and desirous eyes of the women. The latter are handsome, have blooming complexions and in all anatomic traits accentuate their sex. Short in stature, they are well proportioned, esthetic in carriage, opulent in physiologic functions, and have pretty, tiny feet and hands. Their shining and jetty hair makes a striking contrast to their milk-white foreheads, rosy cheeks and pink lips.

Intellectually and morally the Portuguese offer an interesting melange of good qualities and bad faults. They are a lovable race when you know them well. They are invariably kind to the poor, gentle to their beasts, and open-hearted to the properly introduced foreigner.

It is announced that the members of the congress will be invited to witness a bullfight in Lisbon. I advise everyone to go. You may with perfect security to any sensitiveness take your wives and daughters. A Portuguese bullfight differs

from a Spanish bullfight as much as a game of bean-bag differs from a college football game. There is no bloodshed, nothing repugnant, but plenty of hilarity, and frequently great athletic ability is displayed by men, horses and bulls. On the short horns of the latter are placed large rubber balls. Sometimes the horse manages to kick the bull in the ribs, when he utters a roar of indignation and returns the insult by butting the horse with his rubber buffers. This pleases the risible centers of the happy Portuguese and the bullfight is over.

There is much that pertains to the Orient in the customs and architecture of Portugal, and the many social laws are undoubtedly only modified conditions that existed when the Moors ruled the peninsula.

The higher classes in Lisbon and Oporto well appreciate the value of educating their daughters, yet conditions are such that the girls must be confined to conventual supervision. In order to maintain this oversight on the young women, yet have them free to enjoy the learning of other countries, they are taught by English and Irish women. The great convent schools of Bom Successo and Salesias, where the girls of the best society are sent, are controlled exclusively by English and Irish sisters.

This naturally brings me to what I shall have to confine myself in this article—educational matters—though I feel no adequate justice can be done to the charming Portuguese people by neglecting to tell of their home life, or of the struggle educated people, including the king, are making for freedom in religious thought.

There exists in Portugal only one educational institution bearing the honor and title of a university. This was founded in Lisbon in 1288 and transferred in 1307 to Coimbre (pronounce, but do not indite, *Quimbre*). A bull of Gregory XI was issued October, 1376, which authorized the university to give degrees in letters and theology. In 1377 the university was again transferred to Lisbon, but 200 years later removed to its former home, Coimbre, where it has remained. It has been the battleground for science and religion through many a century. In 1836 came the great movement of the reformers and then were established under the direct control of the government the departments of medicine, law and the arts. Gradually it became a school of modern ideas, and has kept well up in the progress of nations.

The university is composed of five faculties: medicine, law, theology, mathematics and physics. This last faculty has under its control all instruction in the natural sciences and attached to it are excellent botanical and zo logical gardens. The chairs of Greek and Hebrew are under the charge of the theological faculty. The university buildings are massive, handsome and unique in their architectural designs. They should be well studied, for nowhere throughout the world will the traveler find their equal. The library is large, its decorations are rich and immensely valuable, and combine all the Oriental splendor of the Alhambra with the utility of the libraries in St. Mark's, Venice.

The course of instruction at the great Portugal university is essentially modern in that it is free from church interference and generously supported by the state. The professors and those foreigners who are invited to talk to the students have the freedom of the air to say what they think. (This in some respects differs from a few of our universities.)

The professors of Coimbre, all Portuguese, are divided into fifty-three lecturers (lentes) and twenty-two associate lecturers (substitutos). The members of the different faculties are designated by their capes and hats, as follows: Medicine, yellow, 18 members; law, red, 21 members; mathematics, blue, 13 members; philosophy, blue and white, 11 members, and theology, white, 9. On all official occasions and at examinations the professors are dressed in their distinctive robes and hats. The students are obliged to wear a uniform of black cloth, composed of short breeches, cape and black hat, of a disgraceful shape and size. For this latter reason the students go bareheaded except on official occasions.

The last statistics show that there are 1,180 students in all departments, divided as follows: Law, 510; mathematics, 130; medicine (and pharmacy), 140; and in the natural sciences, 360, while it will undoubtedly surprise many readers to learn that in the department of theology there are only 40 students.

The course is five years, and the charge for instruction about $30 a year, except in medicine, where it is somewhat greater. The minimum age is 16 years, but the average age of the students is about 19. Women are rarely seen at the university, the woman of eunuchal tendency not yet having arrived at Portugal. One lone woman of mixed inheritance received a degree of philosophy in 1894. She has disappeared. There are few foreigners at the university, unless we class the Brazilians as such. These latter of Portuguese blood, attend in large numbers.

In Oporto there is a school of medicine where instruction is of a high type. No degrees are conferred by this school, applicants having to pass the examination at Coimbre.

WILLIAM LEE HOWARD, M.D.

The Physician and the Pharmacopeia.

NEW YORK, Feb. 18, 1906.

To the Editor:—I thank you for your courtesy in printing my letter with the above title in your pages (February 17, p. 526). Your answer, however, requires a reply on my part. You say: "We do not believe anyone suggests that we should be limited to Pharmacopeial preparations." And further you make the statement: "Our correspondent, like too many others, has set up a straw man to knock down." Now, I am not given to setting up straw men, and I am not very likely to make absurd statements, when the subject of proprietary remedies is under discussion, as I have studied the question from all sides, in all its phases, and at a time when too many who show now such commendable zeal on the subject were an absolute *terra incognita*. I could name you a dozen good, but ignorant men, who just did show themselves so narrow-minded and so bigoted as to condemn—condemn utterly—every proprietary and non-Pharmacopeial preparation. But I can do better than that. In THE JOURNAL of the American Medical Association, January 20 (p. 221, col. 1), Dr. Frank G. Wheatley makes the statement that "the time has come when there are no ethical preparations. *We should ignore the whole list.* If we will confine our prescribing to articles recognized by the national authority, [The Pharmacopeia], we shall confer one of the greatest boons on the public, and incidentally on ourselves, that the annals of medicine record." And on the same page, column 2, Dr. James C. White is reported as saying, that "though in practice fifty years he had never prescribed a single remedy outside of those contained in the Pharmacopeia." (I wonder if he used cocain between 1884 and 1894, as it was only in the latter year that cocain became official, while Koller discovered it in 1884.) So you see, there are men, so ill-informed, so narrow-minded, as to advocate the non-use of any non-Pharmacopeial preparations. And it was against them that my letter was directed. For I fear that through excess of zeal, through misdirected energy, through intemperate statements of ill-informed persons, who are not familiar with the actual needs of the every day practitioner, our entire work, our labor for years, may go for naught.

WILLIAM J. ROBINSON, M.D.

Poison Ivy.

WASHINGTON, D. C., March 6, 1906.

To the Editor:—In THE JOURNAL, Jan. 27, 1906, page 301, you quote from the *Cincinnati Lancet-Clinic* from an article by Dr. E. S. McKee on the subject of poisoning by poison oak or ivy. Is it possible that the work of Pfaff, published in the *Journal of Experimental Medicine* (1897, vol. ii, No. 2), is not yet known to the profession?

Dr. McKee "has been poisoned twice by these plants and feels that he knows many times more about the trouble than he possibly could have known had he not had this experience." I have been poisoned about eighty times and feel that I also know something of the condition.

As a result of the work of Pfaff, we know that the irritant substance of *Rhus toxicodendron* and *Rhus venenata* is a fixed oil which is soluble in alcohol and which is precipitated by lead subacetate. The oil is similar to cardol, but is probably not

identical. The use of lead salts in dermatitis resulting from action of the oil is rational, but the precipitated lead compound must be removed from the skin as it is gradually decomposed; the oil is set free and its action continues.

The use of soap and water and a good hand brush is the simplest method of getting rid of the oil. The action is entirely mechanical and is perfectly efficient. Alcohol dissolves and removes the oil, but successive portions must be allowed to flow over the affected part, as, after contact, the alcohol may contain sufficient oil to spread the irritation. Ordinary alcohol must be used and not 50 per cent. alcohol, as the latter does not dissolve the oil. The action is purely a solvent one and not one of neutralization.

In every case the above methods of treatment are at once effective: further irritation is stopped and healing of the lesions begins. In some cases when actual sloughing has taken place a week or two may be necessary for complete healing, but ordinarily two or three days' time is sufficient. The use of ointments or fatty substances is both theoretically and clinically wrong, as such substances serve only to spread the oil.

It should be remembered that the clothing may have been in contact with the plants and that oil may be transferred from it to the skin and the irritation continued in this way. I have been poisoned by handling shoes worn while collecting the plants a year previously. Pollen from the flowers contains sufficient oil to give rise to a dermatitis in unusually susceptible persons.

A. W. BALCH,
P. A. Surgeon, United States Navy.

American Association of Medical Journal Advertisers.

MEMPHIS, TENN., March 10, 1906.

To the Editor:—I am sending herewith for publication in THE JOURNAL copy of constitution of the American Association of Medical Journal Advertisers. This constitution has been agreed on through correspondence between the medical directors of a number of institutions as the basis of a temporary organization to stand until the annual meeting to be held in connection with the session of the American Medical Association in June. It will come up for confirmation or amendment at that meeting. Owners or superintendents of institutions who are in accord with the objects of this organization, who have not already been reached by direct correspondence, are requested to send their application for membership to the secretary. GEO. E. PETTEY, Secretary.

CONSTITUTION OF THE AMERICAN ASSOCIATION OF MEDICAL JOURNAL ADVERTISERS.

NAME.

This Association shall be known as the American Association of Medical Journal Advertisers.

OBJECT.

To assist in maintaining proper ethical standards and for the advancement of truth and of honorable dealing.

To establish and promulgate definite rules of conduct with reference to various questions which arise in institution work, which questions are left open to more or less doubt and to variable constructions, by the general provisions of the Principles of Medical Ethics of the American Medical Association.

MEMBERSHIP.

Membership in this association shall be limited to physicians who are responsible owners, superintendents or medical directors of "reputable" institutions devoted to the treatment of mental and nervous diseases and of alcohol and drug addictions who subscribe to the Principles of Medical Ethics of the American Medical Association.

OFFICERS.

The officers of the association shall be a president, a vice-president and a secretary, who shall be elected annually at a meeting to be held at the time and place of session of the American Medical Association, and shall hold their offices for one year and until their successors are elected.

The president and vice-president shall discharge such duties as are incumbent on a presiding officer.

The secretary shall be the executive officer of the association and shall conduct the correspondence, keep the records and transact such other business as may be committed to him by vote of the Association or by direction of the executive committee.

The president, vice-president and secretary and two other members, to be elected annually, shall constitute an executive committee who shall have authority to pass on and decide all matters affecting the interest of members or applicants for membership, which may arise and require action in the intervals between the meetings.

The secretary shall keep an account of the expense incurred in conducting the correspondence and in carrying out any other orders of the association and the same shall be prorated among the members and paid annually.

MEETINGS.

This association shall meet annually at the time and place of meeting of the American Medical Association.

GENERAL PROVISIONS.

Since advertising in medical journals is the principal means the members of this association have in bringing their work to the notice of the profession and since it is unsatisfactory and unfair for men who have won an honorable place in the profession by conscientious and diligent study and by honorable and fair dealing to be brought into competition, on terms of equality, with irregular and disreputable institutions, as is done when the advertisements of such disreputable institutions appear in the pages of the same journals containing the cards of institutions of good standing, therefore the members of this association pledge themselves not to run an advertisement in any medical journal or medical directory which admits to its pages the advertisements of irregular institutions.

Any institution or physician guilty of any of the following acts shall be deemed irregular for the purposes of this organization.

1. Use of a secret remedy or secret form of treatment.
2. Publishing testimonials of cures.
3. Guaranteeing cures.
4. Sending out prepared or home treatments for drug addictions.
5. Paying commissions to physicians for sending patients.
6. Advertising in the lay press in any manner except the insertion of a simple card giving the name and location of the institution or physician, class of patients treated, office hours of the superintendent or medical director and telephone number; provided, however, that the publication of such cards shall be confined to the lay press of the county in which the institution or physician is located.

[*Explanatory Note.*—The reason for each of the provisions above given would seem sufficiently clear, except probably the fourth. To those who have not given attention to such matters it might seem that to prohibit the sending out of home treatments for the drug addictions would be an unreasonable restriction and one that would interfere with the natural rights of individuals and of physicians, but that is not the purpose of the rule. The reason for such restrictions is this: In almost every instance remedies advertised as home cures for the morphin and other drug addictions are merely some concealed form of opiate. It is not difficult to switch the drug user from his morphin or other opiate on to the "cure," which he is assured is merely a harmless tonic. This assurance he accepts as true and under the belief that he has been freed from his drug slavery and in the buoyancy and hope that such a deliverance would bring, he writes glowing testimonials of his cure while still under the influence of the supposedly harmless tonic. When he attempts to leave off this tonic, he finds that he is totally unable to do so, in fact, that he is as much a slave to the "cure" as he was to his original drug, and that now, instead of being able to buy his drug supply in the open market at a reasonable price, he is compelled to send ten or more dollars per month to his home cure vendor for his drug supply, as he can not readily leave it off and resume his former drug. These "cures" usually contain a combination of narcotics by the use of which the victim acquires a double or triple addiction instead of the single one which he had before the use of such "cure." These home treatments do not really cure the morphin or other drug addiction. This fact is known to their vendors as well as to us, therefore we are compelled to conclude that one who continues to advertise and send out such a "cure" does so with fraudulent intent, and is, therefore, unworthy of association with gentlemen, and should not be allowed to practice his deception on an unsuspecting public by using space in the columns of medical journals.]

Marriages

W. H. BURKE, M.D., Prairieburg, Iowa, to Miss Dolan, recently.

WILLIAM H. BUTTRAM, M.D., to Miss Cora Tipton, both of Niota, Tenn., recently.

W. J. WEST, M.D., Knoxville, Tenn., to Miss Alice V. Naylor of Little Rock, Ark., March 1.

WILLIAM M. COOLEY, M.D., to Miss Ella Victoria Engstrom, both of Peoria, Ill., February 21.

GEORGE LAMB BUIST, JR., M.D., to Miss Adelaide Richardson, both of Brooklyn, N. Y., February 27.

WILLIAM JESSE JENNINGS, M.D., to Miss Sarah Tillman Flowers, both of Blakely, Ga., March 6.

SCHUYLER COLFAX GRAVES, M.D., Grand Rapids, Mich., to Miss Caroline E. Launt of Walker Township.

HARRY F. RUBEL, M.D., to Miss Clara Sander, both of Le Mars, Iowa, in Sioux City, Iowa, February 26.

FRANK THOMAS RIDLEY, M.D., Frederick, Va., to Miss Nellie Morris Godwin of Charlottesville, Va., March 14.

A. LEO FRANKLIN, M.D., Cumberland, Md., to Miss Lelia Weston Jordan at Charlestown, W. Va., March 8.

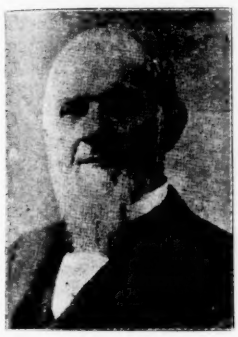
H. B. JOHNSON, M.D., Pomona, Kan., to Miss Agnes Charlotta Thestrup of Williamsburg, Kan., March 6.

RALPH WALDO LOBENSTINE, M.D., New York City, to Miss Anne Munroe Williams of Ocala, Fla., at Flushing, N. Y., March 8.

Deaths

Charles **Augustus Lindsley, M.D.,** one of the foremost sanitarians of America, died suddenly at his home in New Haven, Conn., March 9, aged 79. His death was due to heart disease, from which he had suffered for several years. He was born in Orange, N. J., Aug. 19, 1826; was graduated from Trinity College, Hartford, with the degree of A.B. in 1849, and received his M.A. degree in 1852. He studied medicine at the College of Physicians and Surgeons in the City of New York and in the Medical Institution of Yale College, New Haven, and was graduated from the latter institution in 1852. From 1860 to 1883 he was professor of materia medica and therapeutics at this institution; from 1883 to 1897, professor of theory and practice of medicine, and thereafter emeritus professor; dean of the factulty from 1863 to 1885, and lecturer on sanitary science from 1898 to 1899. He was attending physician at the Connecticut State Hospital from 1864 to 1876, and secretary of the General Hospital Society of Connecticut from 1865 to 1877. He was health officer of New Haven from 1874 to 1888.

His society affiliations were numerous; he was president of the New Haven Medical Association in 1877; president of the New Haven County Medical Association, 1875-1876; president of the Connecticut Medical Society in its centennial year, 1892. For many years he was a member of the American Medical Association, and its vice-president in 1890, and orator in State Medicine in 1892; vice-president of the American Public Health Association in 1877, and president of the International Conference of State and Provincial Boards of Health from 1893 to 1895. He was also an honorary member of the state medical societies of New York and New Jersey.



C. A. LINDSLEY, M.D.

He was made a member of the Connecticut State Board of Health in 1878, and has been its secretary and executive officer since 1884. He has been vice-president and president of the New Haven Dispensary from the time of its foundation in 1872. He has been a prolific writer on subjects connected with public health and sanitation. His greatest work was as secretary and executive officer of the State Board of Health, which under his wise administration has become one of the most noteworthy in the United States. Dr. Lindsley was also a pioneer in the investigation of typhoid fever epidemics in the state.

Semon R. Hewett, M.D. Rush Medical College, Chicago, 1867; local surgeon at Charles City, Iowa, of the Chicago, Milwaukee & St. Paul Railway; health officer of Charles City; a member of the International Association of Railway Surgeons, Austin Flint-Cedar Valley Medical Society, and for many terms president of the Floyd County Medical Society; assistant surgeon in the United States Marine-Hospital Service during the Civil War, died at his home in Charles City, March 4, from heart disease, aged 75.

Henry Emory Rothe, M.D. College of Physicians and Surgeons in the City of New York, 1880; deputy county physician of Hudson County from 1879 to 1895; hospital steward during the Civil War; treasurer of Harrison, N. J., and assessor of the Third Ward of Newark for nine years, died at his home in Harrison, Newark, March 4, from cerebral hemorrhage, after an illness of six days, aged 65.

Lewis Williams, M.D. Miami Medical College, Cincinnati, 1857, a member of Grant County (Ind.) Medical Society, died at his home in Marion, March 5, after a long illness from senile debility, aged 89. The medical society held a special meeting March 7, passed resolutions regarding the death of Dr. Williams, and voted to attend the funeral in a body.

John F. Dyer, M.D. Medical Department of Western Reserve University, Cleveland, 1902; a member of the American Medical Association, the North Texas Medical Society, and president of the Lamar County Medical Society in 1904; formerly a practitioner of Chicota, Texas, died at his home in Mineral Wells, Texas, Nov, 23, 1905, aged 39.

Henry T. Calkins, M.D. University of Louisville, Medical Department, 1869; said to have been the oldest practitioner in northern Michigan; a member of the American Medical Association and of the Michigan State Medical Society; division surgeon of the Grand Rapids & Indiana Railroad; health officer of Petoskey, Mich., died suddenly at his home in that city, from heart disease, March 5.

Charles Boaz Whitfield, M.D. College of Physicians and Surgeons in the City of New York, 1871; member and some-time president of the Marengo County (Ala.) Medical Society; a veteran of the Civil War, was found dead in the road about five miles from his home in Demopolis, Ala., March 1, supposedly from heart disease, aged 67.

James M. Selfridge, M.D. Jefferson Medical College, Philadelphia, 1856; one of the founders of Fabiola Hospital, Oakland, Cal.; attending physician to the State Institution for the Deaf, Dumb and Blind from 1872 to 1878, died at his home in Oakland, March 4, from cancer, after an illness of several years, aged 81.

Arthur R. Cobb, M.D. Hahnemann Medical College, Philadelphia, 1891, of Philadelphia, died in the Hahnemann Hospital in that city, March 2, from injuries received as a result of jumping from the window of a cottage in Cape May, N. J., February 17, while suffering from delirium consequent on overwork, aged 35.

R. C. Volker, M.D. Central College of Physicians and Surgeons, Indianapolis, 1872, formerly medical director of the St. Louis, Iron Mountain & Southern Railway, and in charge of the railway hospital at Fort Smith, Ark., died at his home in St. Louis, February 22, after an illness of six months, aged 67.

Martyn Taylor, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1852; one of the oldest practitioners of Scioto County, Ohio; acting assistant surgeon in the Army during the Civil War, died at his home in Scioto-ville, March 3, after an illnes of several weeks, aged 78.

Frank L. Wisdom, M.D. New Orleans School of Medicine, 1860, captain and surgeon in the Confederate service during the Civil War, and chief of staff at the Division Hospital, Brunswick, Ga., in 1861, died suddenly at his home in Texarkana, Texas, March 1, from heart disease, aged 70.

Ira H. Gillum, M.D. Rush Medical College, Chicago, 1874; a veteran in the Civil War; a member of the Indiana legislature; chairman of the Iroquois County (Ill.) board of supervisors, and alderman of Milford, Ill., died at his home in that city, March 7, from cerebral hemorrhage.

John Harris Pettee, M.D. Harvard University Medical School, Boston, 1897, of Boston, died at the home of an acquaintance in Newton Highlands, Mass., from general collapse, due to worry over the publicity attending his connection with the "dress suit-case mystery," March 5.

John Phillips, M.D. Medico-Chirurgical College, Philadelphia, 1904, of Lickdale, Pa., formerly resident physician in the Allentown Hospital, died in the Lebanon Hospital, February 23, from septicemia following a mastoid operation, after an illness of three weeks, aged 28.

David D. Richardson, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1871, chief resident physician of the State Hospital for the Insane, Norristown, Pa., died suddenly from heart disease, in his apartments at the hospital, March 6, aged 60.

John P. Cotton, M.D. Medical College of Ohio, Cincinnati, 1842; a member of the American Medical Association, and for more than sixty years a practitioner of Charleston, W. Va., died at his home in that city, March 3, after a lingering illness, aged 85.

John Eaton Pugh, M.D. Tulane University of Louisiana, Medical Department, New Orleans, 1853, of Albemarle, La., surgeon in the Confederate service during the Civil War, died at the home of his son-in-law, near Napoleonville, La., February 27.

James L. Jones, M.D. Montana State Board, 1889; coroner of Beaverhead County for two terms and county physician in 1892, died at his home at Wisdom, Mont., February 25, from heart disease, after a prolonged illness, aged 48.

C. R. Mason, M.D. Cincinnati College of Medicine and Surgery, 1870, one of the wealthiest practitioners of Hartford City, Ind., was found dead in his office, March 7, aged 60.

Simon G. Miller, M.D. Bellevue Hospital Medical College, New York City, 1874, of Francis, Fla., was run over by a train near his home and instantly killed, January 17, aged 59.

Andreas A. Naegeli, M.D. Medical College of Indiana, Indianapolis, 1885, one of the foremost practitioners of Sibley County, Minn., died at his home in Gibbon, from dilatation of the heart, March 3, after an illness of only a few hours, aged 64.

J. P. Bowers, M.D. University of Louisville, Medical Department, 1872, of Fort Worth, Texas, committed suicide at Sanger, Texas, by cuting his throat, February 27, while despondent from ill health and financial reverses, aged 61.

Robert C. Hutchinson, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1880, surgeon of the American line steamship *St. Louis*, died at sea, from pneumonia, February 27, after a short illness, aged 49.

Joseph A. Tipton, M.D. New York University, New York City, 1860, surgeon both in the Confederate army and navy during the Civil War, died at his home in Roanoke, Va., March 5, after a long illness, aged 69.

Sanford W. Adams, M.D. University and Bellevue Hospital Medical College, New York City, 1899, police surgeon of Mount Vernon, N. Y., died at his home in that city, March 7, after an illness of three months, aged 29.

Stuart A. Watson, M.D. University of Louisville, Medical Department, 1873, a prominent practitioner of Bastrop County, Texas, died at his home in Elgin, March 3, from pneumonia, after an illness of eight days.

Matthew Wallace, M.D. University of the Victoria College, Coburg, Ont., 1881, died at his home in Toronto, March 3, from malignant disease, for which an operation was performed in September last, aged 57.

George W. Williams, M.D. Missouri Medical College, St. Louis, 1848, one of the oldest practitioners of Missouri, died at his home in Farmington, March 2, from senile debility, after a short illness, aged 87.

Isaac Newton Brown, M.D. Eclectic Medical Institute, Cincinnati, 1860, a surgeon in the Civil War, died at his home in Ironton, Ohio, March 1, from long-standing disease of the throat, aged 66.

Thomas A. Davis, M.D. Tulane University of Louisiana, Medical Department, New Orleans, 1851, of Selma, Ala., died in Tuscaloosa, Ala., February 27, from influenza, after a short illness, aged 82.

Charles H. Witham, M.D. Medical School of Maine at Bowdoin College, Brunswick, 1875, a practitioner of Boston, died at his home in Cambridge, Mass., Dec. 24, 1905, age 51.

Joseph Torkington, M.D. Jefferson Medical College, Philadelphia, 1885, died at his home in Pawtucket R. I., February 27, from pneumonia, after an illness of one week, aged 56.

Theodore F. Laing, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1883, of Locust Grove, Ga., died at a private sanitarium in Atlanta, Ga., March 2, aged 61.

Solomon Baird Wolfe, M.D. Shelby Medical College, Nashville, Tenn., 1862, of New York City, died suddenly from heart disease in his office, Dec. 14, 1905, aged 61.

Alexander P. Landry, M.D. Harvard University Medical School, Boston, 1870, died at his home in Eel Brook, Yarmouth, N. S., Nov. 6, 1905, after an illness of six weeks.

Elmer W. Heltman, M.D. Toledo (Ohio) Medical College, 1886, an oculist of Toledo, died at his home in that city, March 3, after an illness of six months, aged 44.

William Stross, M.D. Miami Medical College, Cincinnati, 1903, died recently at his home in Cincinnati from chronic nephritis after a prolonged illness, aged 48.

George W. Pleasanton, M.D. Hahnemann Medical College, Philadelphia, 1887, died suddenly at his home in Milford, Del., February 26, from heart disease, aged 45.

Miles Laha, M.D. Hospital College of Medicine, Louisville, 1893, died at his home in New Haven, Ky., February 21, from tuberculosis, after a long illness, aged 48.

William E. Swiler, M.D. Jefferson Medical College, Philadelphia, 1857, died at his home in Mechanicsburg, Pa., March 8, from cerebral hemorrhage, aged 73.

Vandy M. Neal, M.D. Tulane University of Louisiana, Medical Department, New Orleans, 1860, died at his home in Hillsboro, Miss., December 19, aged 70.

W. H. Burke, M.D. Rush Medical College, Chicago, 1902, of Prairieburg, Iowa, died March 1 from pneumonia, after an illness of less than two weeks.

Mabel Wells, M.D. Medical Department of the Johns Hopkins University, Baltimore, died at her home in Wellesley, Mass., March 3, aged 32.

Richard H. Kenning, M.D. College of Physicians and Surgeons, Manitoba, Winnipeg, 1883, died at his home in Chicago, March 6, aged 58.

James Macdonald, M.D. Harvard University Medical School, Boston, 1864, died at his home in Boston, March 8, from heart disease, aged 73.

William H. McCormick, M.D. Jefferson Medical College, Philadelphia, 1864, died at his home in Cumberland, Md., March 6, aged 80.

David M. McFall, M.D. Jefferson Medical College, Philadelphia, 1857, died at his home in Nashville, Tenn., Dec. 20, 1905, aged 72.

James Gates M.D. University of Louisville, Medical Department, 1882, died at El Paso, Texas, Oct. 22, 1905, aged 71.

Nelson H. Church, M.D. Rush Medical College, Chicago, 1869, died March 5, at his home in Chicago, aged 63.

Eugene S. Atwood, M.D. Rush Medical College, Chicago, 1877, died at his home in Chicago, March 2.

Deaths Abroad.

Max Nitze, M.D., professor of urology at Berlin and inventor of the cystoscope, died suddenly, February 22, aged 58. The twenty-fifth anniversary of this invention was celebrated in March, 1904, when honors were showered on Nitze, who was then only a privat docent.

Leon Colin, M.D., formerly inspector general of the French military sanitary service, and president of the Académie de Médicine, died recently at Paris.

Book Notices

MANAGEMENT OF A NERVE PATIENT. By **A. T. Schofield,** M.D., Author of "The Unconscious Mind," "The Force of Mind," "Unconscious Therapeutics," etc. Cloth. Pp. 267. Price, $1.50. Philadelphia: P. Blakiston's Son & Co., 1906.

This little volume is largely in the same line as that of Dr. DuBois (which we reviewed March 10, page 744), and contains a valuable amount of useful suggestions and hints. The author does not discard medical and physical treatment, however, to the same extent or reject hydrotherapy and electricity, as does DuBois. These all play a more or less prominent part in his therapy, and he considers that mental treatment has in it the danger of leading the specialist to consider it too much of a cure-all in itself. Every curative agent, he says, has more claimed for it than it deserves, and this is pre-eminently true of mental action in disease. He does not enter much into the psychology, but has much to say about the unconscious mind and thinks that certain individuals possess a sort of healing gift; he thinks this may be explained by some action on this unconscious mind. However one may view this as a vagary or otherwise, the main part of Schofield's work is sensible and clear and can be profitably read by the medical practitioner. In this country legitimate psychotherapeutics is not necessarily in discredit, however it may be in England; that country, he says, is so overrun with an invasion of American mystics (Eddyites?), that it is hard to obtain for psychotherapy a respectful hearing among medical men. It would be a good thing, however, if a little more systematic instruction on these points in psychic therapeutics were included in the medical curriculum, both here and elsewhere.

A TEXT-BOOK OF PHARMACOLOGY AND THERAPEUTICS, or the Action of Drugs in Health and Disease. By **A. R. Cushny,** M.A., M.D. Fourth Edition. Thoroughly Revised. Illustrated with 52 Engravings. Cloth. Pp. 752. Price, $3.75 net. Philadelphia: Lea Brothers & Co., 1906.

This work has been revised to conform with the new Pharmacopeia and seems to be confined to pharmacopeial preparations. The general arrangement of the text is the same as in previous editions. Part I is devoted to a consideration of organic substances acting locally. Part II takes up organic substances which act after absorption, and considerable space is occupied by discussion of the various anesthetics. Alcohol is mentioned under this head and attention is directed to the dangers attending the use of wood alcohol. In the chapters on ether and chloroform reference is made to Embley's researches, showing that fatal arrest of the heart's action frequently occurs at the beginning of the anesthesia through excessive inhibitory action. Acetanilid, though official in the U. S. Pharmacopeia

under this name, is referred to as antifebrin, the name by which this drug is known in the British Pharmacopeia. Part III deals with the alkalies, alkaline earths, acids and allied bodies. Part IV is devoted to a consideration of the heavy metals, and in Part V ferments, secretions and toxalbumins are discussed. Part VI takes up menstrua and mechanical remedies, and the book concludes with a classification of drugs according to their therapeutic action. Cushny's textbook has long been recognized as a standard and the new edition will add to the prestige it had already earned.

SURGICAL ASPECTS OF DIGESTIVE DISORDERS. By J. G. Mumford, M.D., in Association with A. K. Stone, M.D. Cloth. Pp. 395. Price, $2.50. New York: The MacMillan Co., 1905.

The title of this book does not suggest its real contents. The first chapter describes "ancient conceptions of the digestive organs." It is a brief history of our knowledge of these organs. The second is an account of methods of clinically studying diseases of the stomach, such as physical, chemical, microscopic and *x*-ray examinations. The chapters following, however, are the ones which give greatest value to the book. The authors are to be congratulated on having written a readable and unsually instructive book. It is not a systematic treatise on diseases of digestive organs, but a collection of new facts and well-known ones bearing on the natural course and results of certain diseases and on the relative success of different kinds of treatment. It is quite as interesting and instructive to the physician as to a surgeon. The following titles of succeeding chapters will best explain the scope of the book: "The Stomach", "Dilatation of the Stomach Treated Without Operation", "Ulcer of the Stomach and Duodenum", "Operative Intent of Non-Malignant Disease of the Stomach", "Cancer of the Stomach", "The Bile Passages", "Surgery of the Bile Passages", "The Pancreas", "Abdominal Ptosis", "The Appendix Vermiformis."

There is in these chapters much statistical matter which is new, well analyzed and important. The judgments of the authors are conservative and rarely deserve criticism.

REFRACTION, Including Muscle Imbalance and the Adjustment of Glasses. By R. S. Copeland, A.M., M.D., and A. E. Ibershoff, M.D. Cloth. Pp. 144. Price, 1,50 net. Philadelphia: Boericke & Tafel, 1906

Although within recent years there have been many publications dealing with the problems of refraction, muscular insufficiency and the correct adjustment of lenses for ocular purposes, we believe that none of them is better suited to the beginner than this small work. It is sufficiently illustrated with good, clear cuts, and the literary portion of it is everything that one could desire. No doubt the authors might easily have added to (or, perhaps, padded) their small work, but in the absence of such elaboration we believe that it will have a wider sale than many a larger treatise. If we were disposed to criticise the work from the textbook standpoint the principal objection we would raise is to the small space devoted to skiascopy. That important objective test is not as carefully or as fully considered as it ought to be. On the whole, however, the book is a very useful compendium and can be safely recommended to students of elementary ophthalmology.

MANUALE DELLE MALATTIE DELL 'OCCHIO Ad Uso Degli Studenti E Dei Medicin Pratici Traduzione Italiana Sulla Quarta Edizione Americana. Con note ed Aggiunte del Dr. Edmondo Trombetta and Dr. Carlo Enrico May. Con 360 illustrazionie originali e 21 Tavole con 70 figure colorate. Cloth. Pp. 555. Price 8 lire. Turin: S. Torino: Unione Tipografico-Editrice, 1906.

This is the Italian translation of Dr. C. E. May's well-known work on diseases of the eye, with notes by Dr. Trombetta, instructor in ophthalmology in the University of Turin. It does not differ in any essential respect from the original work, so well known to American students of ophthalmology. As stated in the Italian edition, a number of additions have been made to this textbook, of which Italian readers will reap the benefit. We have reviewed the various editions of this excellent work of Dr. May's and have nothing to add to what has been previously said, except that we have reason to congratulate ourselves that the writings of American authors are beginning to be better appreciated in foreign countries than they have been in times past. We hope and believe that the Italian edition will receive as cordial a welcome as the four American, one British and the German editions of this popular manual.

Miscellany

Epidemics of Yellow Fever in Maryland.—At the last meeting of the General Alumni Association of the University of Maryland, Dr. James Carroll read an interesting paper on this subject. He referred first to the fact that Dr. Nathaniel Potter, a pupil of Dr. Benjamin Rush, and first professor of medicine in the university, held the view that yellow fever was not directly contagious. Dr. Potter believed that he was the only person in America who held that opinion at that time and prepared to defend his belief in an inaugural thesis to be read at the commencement exercises of the University of Pennsylvania. He was dissuaded from this, however, on the grounds of propriety and expediency. Dr. Carroll said that on account of its importance as a seaport, Baltimore must have been the seat of many outbreaks of this disease, yet the only recorded epidemics occurred in the years 1794, 1797, 1800 and 1819. He called attention to the important fact that all the epidemics originated at Locust Point or along the wharves and can be traced directly to the shipping. This is not to be wondered at, as the city was in constant communication with the West Indies. In these days yellow fever was frequently confounded with malaria, and it was sometimes contended that the two diseases were identical. The general restriction of the disease to certain localities and the fact that persons who visited these localities even for only a few hours proved that the disease was one of locality. It was also observed that if the wind blew strongly from the infected district toward the city, within a few days yellow fever appeared in the city. From this it was concluded that the poison must exist in the atmosphere and must be transported by the wind. It was recorded by a Baltimore physician that during an epidemic mosquitoes became an intolerable pest, while only a short time before no mosquitoes were observed. This observation, Dr. Carroll states, agrees with our present knowledge of the facts that the yellow-fever carrying mosquitoes can be conveyed by vessels from one place to another, that in the warmer seasons they breed on shore and that they become infected only after feeding on a patient. This also explains why shipping localities were infected while other places equally favorable for the development of the disease escaped. In the epidemic of 1794 Dr. Drysdale reported that he saw his first case August 7, at Bowley's wharf, and that on August 14, 20, 22 and 23, he saw five additional cases at the same place. Other interesting references to this epidemic were published by Dr. John B. Davidge. Three physicians investigated the cases reported by Dr. Drysdale and stated that the disease was "the common epidemic of the season," "the bilious remittent fever." The outbreak of 1819 followed the arrival of an infected ship from Havana. The fever appeared in July and persisted till the end of October. Among the records of this epidemic are letters and other documents published by order of the mayor, and containing the actual experiences of several physicians. These records show a remarkable unanimity of belief that yellow fever was not contagious.

Foundation of a Medical Society for Demonstrations Only.—At the meetings of most medical societies the demonstration of patients and specimens is secondary in importance to the discourses. When too much attention is devoted to them, the scientific papers are belated. A number of physicians in Berlin have organized an informal society for demonstrations only, each demonstrator being limited to ten or fifteen minutes and only five minutes being allowed for discussion at the time. When it is desired to have discussions exceed this limit they must be transferred to the arena of the already established medical societies. The first meeting of the new organization was held in January. Among others, Brieger exhibited specimens of syphilitic lesions of the liver, simulating tumors, while Karewski presented some patients with these lesions, incorrectly diagnosed at first. Albu exhibited cases of stenosis of the pylorus and Pinkus demonstrated the *Spirochæta pallida*. The society bears the euphonious name of the "Zwanglose Demonstrationsgesellschaft." The description in the *Allg. Med. Ct.-Ztg.* states that the meetings are held at the amphitheater, Ziegelstrasse 18.

Toxicity of Bile.—Meltzer and Salant state that according to the present almost universally accepted view, bile contains a toxic element which is capable of producing nervous depression, coma and paralysis, but does not contain any element which can produce excitation and convulsions. They conducted a series of experiments, however, which proved that, contrary to this generally accepted view, the bile does contain a tetanic element, or an agent which causes increase of excitability of the nervous system. The experiments demonstrated that bile from the common duct of many rabbits causes marked hyperesthesia and tetanic attacks when injected into frogs; stagnant bile (as in the gall-bladder) invariably produces coma and paralysis; the depressive and exciting elements of the bile are mutual antagonists, the effect of both, when simultaneously present, being that of an algebraic sum; the depressive element, when present in a highly effective dose, is the stronger of the two, while the tetanic element becomes effective apparently in a dose far below that which constitutes the minimum for the depressive element.

Death from Thirst.—Dr. W. J. McGee, director of the St. Louis Public Museum, formerly chief of anthropology of the Louisiana Purchase Exhibition, discussed this subject before the St. Louis Medical Society. He has recently made observations in the arid regions of Arizona, and he reported the case of a Mexican who was lost in the desert without drink for eight days. He traveled 108 miles in a stuporous condition and, half dead, finally stumbled into Dr. McGee's camp, where he was revived after great difficulty. Dr. McGee called attention to thirst as a disease, treating of physiologic thirst, thirst beyond physiologic limits,and thirst in extremis. The last might be called living death; death of the tissues takes place from below upward, owing to the impoverished state of the blood and to want of circulation. The victim's toes drop off and breaks in the skin do not bleed because of the non-fluid state of the blood.

Suprarenal Preparations in Treatment of Hemorrhagic Purpura.—M. Labbé of Paris has recently reported a case of severe "myeloid purpura." No treatment proved effectual until a suprarenal preparation was given. Even 4 gm. of calcium chlorid a day failed to prevent the appearance of the severe hemorrhages. They were apparently uninfluenced until a small amount of a suprarenal preparation was injected subcutaneously every day. The hemorrhages ceased at once from the first injection. The aspect of the tissues also changed, the skin became pale and exsanguinated, and it was difficult to draw blood from the finger tip. The suprarenal preparation evidently induced intense vasoconstriction. The results suggest that the trouble in purpura is not so much in the blood itself as in the vessels.—*Bull. de la Soc. Méd. des Hôp. de Paris*, Dec. 28, 1905.

The Doctor.—In the name of thousands of unbroken homes in which midnight hand-to-hand fights with death have been fought and won; in the name of thousands of lives rescued from abnormality and made useful; in the name of unshed tears and forestalled pain and baffled death—I doff my hat today to The Doctor. May he never have use for his own medicine. May each moment of pain he has saved others shine in the crown of his life like a bright star. May the children to whom he has saved parents and the parents to whom he has saved children take time to acknowledge the doctor's worth. May his patients pay him his bill. And in the inevitable hour may a certain grim adversary recognize a noble foe and deal gently with the doctor.—W. J. C., in *Detroit News*.

Campaign Against Tuberculosis in Spain in the Seventeenth Century.—The records of the city of Valencia bear a decree dated 1698 demanding that physicians must inform the municipal authorities when they encounter a case of consumption, and that the clothing and bedding used by a consumptive shall be burned after his death, with the exception of metal articles. A large fine is imposed for buying articles known to have been used by deceased consumptives, and also for neglect to declare the cases to the authorities. The decree provides for the public proclamation of its provisions in all parts of the town by the town crier. The fac simile of the quaint wording and seal is given in the *Siglo Medico* No. 2641, 1904.

Queries and Minor Notes

COMPOSITION OF CASTORIA.

McBAIN, MICH, March 1, 1906.

To the Editor:—Two years ago I was called to attend a baby aged one week. The father had given it, so he said, only half a teaspoonful of castoria. When I saw the child it was dying, and breathed its last half an hour later. A few weeks ago I was called to attend a child of 10 months, suffering from diarrhea. The parents gave hardly any answer to questions. The child was comatose, the pupils did not react to light, pulse was 132, and the body was cold. The parents said that the child had had innumerable passages. Two days later, when the child was better, I learned that they had given it five teaspoonfuls of castoria within a short time. I would like to know the ingredients of castoria. Can you give me this information?

J. G. REINBERG, M.D.

ANSWER.—According to the patent, the formula is as follows: To 135 pounds of senna leaves add 35 gallons of water at 65 C., in which has been dissolved 48 ounces of sodium bicarbonate. Exhaust the senna by percolation until 240 pounds are obtained. In this dissolve 210 pounds of sugar and 4 ounces of Rochelle salts, then add spirits of gaultheria, 18 pints, and spirits of pepo, spirits of chenopodium (wormseed), spirits of peppermint and spirits of anise, of each 2 ounces.

CHARITIES AND THE COMMONS.

TISKILWA, ILL., March 10, 1906.

To the Editor:—In your issue of March 10, 1906, under title of "Public Instruction in Sexual Hygiene," page 729, you speak of the periodical *Charities and the Commons*. Where can I get this paper?

C. F. HORNER.

ANSWER.—*Charities and the Commons* is a weekly review of philanthropy and social advance, published under the Charities Publication Committee of the New York Charity Organization Society, 105 East 22d St., New York, and edited by Edward T. Devine, Graham Taylor and Paul U. Kellogg. The first weekly issue of each month appears as an enlarged magazine number. Subscription, two dollars a year. Single copies, ten cents each.

DISCUSSION WANTED ON CONTRACT PRACTICE.

YORK, PA., March 6, 1906.

To the Editor:—I would like to have your opinion relative to some important questions that threaten the dignity and usefulness of the medical profession. Recently I was appointed chairman of a committee "to investigate the propriety of contract practice and to make a report at the next regular business meeting of the York County Medical Society as to what forms of contract practice this committee considers consistent, and what forms inconsistent with the Principles of Ethics of the American Medical Association." Is life insurance work contract practice? Is any or all of it, mere inspections for twenty-five cents, and examinations for which from three to five dollars are paid, consistent with the Principles of Ethics of the American Medical Association? Is there anything inconsistent in the contract practice of railroad surgeons? Likewise of physicians who accept contract work of operators of mines and factories? Also of physicians who accept temporary contracts of construction contractors who employ foreign labor in the construction of railroads, trolley lines, reservoirs, sewer systems, etc.? What would you say of physicians who accept a contract to attend members of clubs and secret organizations for $1.50 a year, or $2 a year per member, and do all the work in said member's family, except to attend labor cases and venereal diseases? These questions are beginning to assume serious aspect in some sections, and we believe they are better dealt with in the beginning than later. What action has been taken by other societies to prohibit contract practice which is inconsistent with the Principles of Ethics and derogatory to the dignity and usefulness of the medical profession?

G. E. HOLTZAPPLE.

ANSWER.—The questions asked above are important ones, and have been asked by many other correspondents during the last three or four years. We have discussed the subject in some of its phases several times (see THE JOURNAL, Dec. 7, 1903, p. 1817; Jan. 27, 1906, p. 295; Feb. 17, 1906, p. 517; Oct. 29, 1904, p. 1322; Oct. 15, 1904, p. 1158; Sept. 10, 1904, p. 742; Oct. 8, 1904, p. 1067; Feb. 20, 1904, p. 548), but we believe that a discussion in our paper will be valuable. We would especially like to hear what societies have already acted on the matter, and what action was taken. It is a subject that has caused our profession in other countries serious trouble, and is already a difficult problem with us in many localities. The Principles of Medical Ethics refers to the matter only in a general way. Section 1 of Article VI says: "By the members of no profession are eleemosynary services more liberally dispensed than by the medical, but justice requires that some limits should be placed to their performance. Poverty, mutual professional obligation, and certain of the public duties named in Sections 1 and 2, of Chapter III, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or the rich, or by societies for mutual benefit, for life insurance, or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege."

State Boards of Registration

COMING EXAMINATIONS.

GEORGIA Medical Examining Board (Regular), the Capitol, Atlanta, April 7. Secretary, E. R. Anthony, Griffin.

UTAH State Board of Medical Examiners, Salt Lake City, April 2. Secretary, R. W. Fisher, Salt Lake City.

ARIZONA Board of Medical Examiners, Phoenix, April 2-3. Secretary, Ancil Martin, Phoenix.

CALIFORNIA Board of Medical Examiners, San Francisco, April 2-3. Secretary, Charles L. Tisdale, San Francisco.

IDAHO State Board of Medical Examiners, Pocatello, April 3. Secretary, J. D. Conant, Jr., Genesee.

MONTANA Board of Medical Examiners, Senate Chamber, the Capitol, Helena, April 3. Secretary, William C. Riddell, Helena.

NORTH DAKOTA State Medical Examining Board, Grand Forks, April 3. Secretary, H. M. Wheeler, Grand Forks.

OHIO Board of Registration and Examination, State House, Columbus, April 3. Secretary, D. N. Kinsmann, Columbus.

MINNESOTA State Board of Medical Examiners, State Capitol Building, St. Paul, April 3-5. Secretary, O. E. Linjer, Minneapolis.

MISSOURI State Board of Health, Kansas City, April 3-5. Secretary, J. A. B. Adcock, Warrensburg.

RHODE ISLAND State Board of Health, State House, Providence, April 5. Secretary, Gardner T. Swarts, Providence.

ARKANSAS State Board Medical Society, Little Rock, April 10. Secretary, J. P. Runyan, Little Rock.

MISSOURI State Board of Health, St. Louis, April 10-12. Secretary, J. A. B. Adcock, Warrensburg.

WEST VIRGINIA State Board of Health, Parkersburg, April 10-12. Secretary, H. A. Barbee, Point Pleasant.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, D. C. April 12. Secretary, William C. Woodward, Washington, D. C.

ILLINOIS STATE BOARD OF HEALTH, Great Northern Hotel, Chicago, April 18-20. Secretary, J. A. Egan, Springfield.

Maryland December Report.—Dr. J. M. Scott, secretary of the Board of Medical Examiners of Maryland, reports the examination held at Baltimore, Dec. 13-16, 1905. Of the 62 applicants who were present, 25 participated in the examination for the first time, of whom 16 were successful. Thirty-four applied for re-examination in branches in which they had previously failed; of these 15 were successful, working off all branches. Primary examinations require a general average of 75 per cent. Those re-examined are required to make 75 in each branch. Three took the examination for second year students and have completed studies in anatomy, chemistry, materia medica and physiology. The following colleges were represented:

College.	Year Grad.	Per Cent
PASSED.		
Johns Hopkins University	(1902) 89; (1903) 87; (1904)	88
University of Pennsylvania	(1904)	83
Howard University	(1905) 80, 82,	88
University of Maryland	(1902) 83; (1904) 83; (1905) 80, 80,	85
College of P. and S., Boston	(1905)	75
Baltimore Med. Coll.	(1905)	93
Woman's Med. Coll., Philadelphia	(1904)	84
College of P. and S., Baltimore	(1904)*	
Baltimore University	(1904)*	
University of Maryland, 2 candidates	(1900);* 3 candidates (1905)*	
Maryland Med. Coll.	(1901);* (1902);* 2 candidates, (1904);* (1905).* 84.	
Baltimore Med. Coll.	(1904)*	
George Washington University	(1904)*	
FAILED.		
University of Maryland	(1904) 63; (1905) 58, 62,	63
Maryland Med. Coll.	(1905)	61, 65
University of Pennsylvania	(1904)	64
Georgetown University	(1904)	72
Baltimore Med. Coll.	(1905)	61
Maryland Med. Coll. (2 candidates)	(1904),* 9 candidates (1905).*	
Baltimore University	(1899)*, (1903)*	
University of the South	(1904)*	
Christ Institute	(1904)*†	
University of Maryland	(1902),* 2 candidates (1905)*	
Baltimore Med. Coll.	(1905)*	

* Re-examined, no percentage assigned.

† Graduates of this institution (the character of which is well known) were at first refused recognition by the board, but a writ of mandamus was sued out against it, and on a hearing and examination of the law prescribing what colleges should be recognized by the board of medical examiners, the court ordered that as this institution was legally incorporated, its graduates should be received by the Board of Medical Examiners of Maryland. The court ruled, furthermore, that under the law equipment, curriculum, hours of study, etc., could not be considered if the institution was legally incorporated; therefore the board was obliged to receive the graduates of this institution.

Virginia December Report.—In the report of the examination held at Richmond in December, 1905, published in THE JOURNAL, Feb. 24, 1906, page 608, it is stated that a graduate of the Medico-Chirurgical College of Philadelphia failed. This is an error; it should have been the Medico-Chirurgical Department of Christ Institute, Baltimore.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending March 10, 1906:

Kirby-Smith, R. M., asst.-surgeon, advanced to rank of captain from February 28, 1906.

Appel, D. M., deputy surgeon-general, relieved from duty in the Philippines Division to take effect at such time as will enable him to comply with the order, and to proceed on transport sailing from Manila, P. I., after April 27, 1906, to San Francisco, where, on arrival, he will report by telegraph to the military secretary of the Army for further orders.

Wales, Philip G., surgeon, relieved from duty in the Philippines Division, and will proceed on transport sailing from Manila, P. I., after July 1, 1906, to San Francisco, where, on arrival, he will report by telegraph to the military secretary of the Army for further orders.

Whitmore, E. R., asst.-surgeon, relieved from duty at Fort Jay, N. Y., and ordered to Fort Warren, Mass., for duty.

Keefer, Frank R., surgeon, having reported at San Francisco, in compliance with orders heretofore issued, will proceed to the Presidio of Monterey, Cal., and report to the commanding officer of that post for duty.

Clayton, J. B., asst.-surgeon, granted 2 months' leave of absence, to take effect on being relieved from temporary duty at the United States Military Prison, Fort Leavenworth, Kansas.

Page, Henry, asst.-surgeon, on arrival at San Francisco, will proceed to Fort Leavenworth, Kansas, and report to the commandant of the United States Military Prison at that post for duty, and by letter to the commanding general, Department of the Missouri, relieving Captain Jere B. Clayton, asst.-surgeon.

Woodbury, Frank T., asst.-surgeon, advanced from grade of first lieutenant to that of captain, from March 6, 1906.

Shook, Jay R., asst.-surgeon, advanced from grade of first lieutenant to that of captain, from March 6, 1906.

Vose, William E., asst.-surgeon, advanced from grade of first lieutenant to that of captain, from March 6, 1906.

Kieffer, Chas. F., surgeon, sick leave of absence extended twenty days.

Bispham, Wm. N., asst.-surgeon, ordered to proceed from Fort Logan, Colo., to Fort D. A. Russell, Wyoming, for temporary duty.

Huggins, John B., asst.-surgeon, now at San Francisco, is assigned to duty in the Army Transport Service and will report in person to the medical superintendent of that service at San Francisco.

Mason, George L., dental surgeon, ordered to visit Key West Barracks, Fla., for three weeks; then Fort Morgan, Ala., for three weeks.

Wing, Franklin F., dental surgeon, left Fort Riley, Kansas, for duty at Fort Omaha, Neb.

Shellenberger, James E., contract surgeon, left Fort Brown, Texas, for duty at Fort Ringgold, Texas.

Koyle, Fred T., contract surgeon, left Fort Ringgold, Texas, for duty at Fort Bliss, Texas.

Wall, Francis M., contract surgeon, returned to Fort Oglethorpe, Ga., from leave of absence.

Feeney, John M., contract surgeon, relieved from duty at Fort Trumbull, Conn., and ordered to Fort Terry, N. Y., for duty.

McMillan, Clemens W., contract surgeon, relieved from duty at Fort Terry, N. Y., and ordered to Fort Trumbull, Conn., for duty.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending March 10, 1906:

Plummer, R. W., P. A. surgeon, detached from the Naval Recruiting Station, Kansas City, Mo., and ordered to the Naval Recruiting sub-station, St. Joseph, Mo.

McDonell, W. N., asst.-surgeon, ordered to the *Yankton*.

Schwerin, L. H., acting asst.-surgeon, ordered to the *Celtic*.

Dennis, J. B., surgeon, detached from the Naval Hospital, Pensacola, Fla., and ordered to the Naval Proving Grounds, Indian Head, Maryland.

Benton, F. L., surgeon, detached from the Naval Hospital, Brooklyn, and ordered to the Naval Hospital, Pensacola, Fla.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending March 7, 1906:

King, W. W., P. A. surgeon, directed to report to the director of the Hygienic Laboratory for temporary duty.

Ward, W. K., asst.-surgeon, granted seven days' leave of absence from March 3, 1906.

Fowler, J. B., acting asst.-surgeon, granted one month's leave of absence, from March 31, 1906, and excused for a further period, April 30 to June 30, 1906, without pay.

Grace, J. G., acting asst.-surgeon, granted leave of absence for one month from March 26, 1906, and excused from duty without pay April 26 to June 30.

Wetmore, W. O., acting asst.-surgeon, granted four days' extension leave of absence, from February 26.

APPOINTMENT.

Dr. W. R. Brinckerhoff was appointed director of the Leprosy Investigation Station at Molokai, Territory of Hawaii, February 2.

RESIGNATION.

Mathias Walerius resigned as pharmacist of the second class to take effect March 8, 1906.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service during the week ended March 9, 1906:

SMALLPOX—UNITED STATES.

California: Los Angeles, Feb. 17-24, 2 cases; San Francisco, 10 cases.
District of Columbia: Washington, Feb. 24-March 3, 15 cases.
Florida: Dade County, Feb. 17-24, 5 cases; Duval County, Feb. 10-24, 27 cases; Escambia County, Feb. 10-17, 1 case; Jackson County, Feb. 10-24, 15 cases, 1 death; Orange County, Feb. 17-24, 4 cases; Polk County, Feb. 10-24, 11 cases.
Georgia: Augusta, Feb. 19-March 5, 9 cases.
Illinois: Chicago, Feb. 24-March 3, 1 case.
Indiana: Terre Haute, Feb. 24-March 3, 1 case.
Kansas: Leavenworth, Feb. 1-28, 1 case.
Kentucky: Covington, Feb. 24-March 3, 2 cases.
Louisiana: New Orleans, Feb. 24-March 3, 2 cases.
Maine: Biddeford, Feb. 24-March 3, 1 case; Portland, 1 case.
Maryland: Baltimore, Feb. 24-March 3, 2 cases.
Missouri: St. Louis, Feb. 24, March 3, 4 cases.
Montana: Helena, Feb. 1-28, 1 case.
Ohio: Canton, Feb. 17-1-24, 1 case; Cincinnati, Feb. 23-March 2, 8 cases.
Tennessee: Nashville, Feb. 24-March 3, 2 cases.
Utah: General, Jan. 1-31, 122 cases; Ogden, Jan. 1-31, 6 cases; Feb. 1-28, 4 cases; Salt Lake City, Feb. 17-24, 25 cases.
Virginia: Roanoke, Feb. 1-28, 5 cases.
Washington: General, Jan. 1-31, 17 cases.
Wisconsin. Appleton, Feb. 24-March, 3, 2 cases; Beloit, 2 cases.

SMALLPOX—FOREIGN.

Brazil: Pernambuco, Jan. 15-31, 36 cases.
Canada: Queen's County, March 1, 2 cases; St. John, 1 case; Toronto, Feb. 17-24, 2 cases.
Gibraltar: Feb. 18-25, 12 cases.
Great Britain: Bristol, Feb. 10-17, 4 cases; London, 2 cases.
India: Bombay, Jan. 31-Feb. 6, 3 deaths; Calcutta, Jan. 20-27, 102 deaths; Karachi, Jan. 28-Feb. 4, 12 cases, 4 deaths; Madras, Jan. 27-Feb. 2, 27 deaths; Rangoon, Jan. 20-27, 46 deaths.
Mexico: Tuxpam, Feb. 10-27, 4 deaths.
Turkey: Alexandretta, Feb. 3-10, 20 cases, 2 deaths.

YELLOW FEVER—FOREIGN.

Mexico: Vera Cruz, Feb. 11-17, 1 case.
Panama: Bocas del Toro, Feb. 22, 1 case.

CHOLERA—FOREIGN.

India: Calcutta, Jan. 20-27, 44 deaths; Rangoon, 4 deaths.

PLAGUE—FOREIGN.

Brazil: Pernambuco, Jan. 15-31, 1 death.
India: General, Jan. 20-27, 4514 cases, 3,747 deaths; Bombay, Jan. 31-Feb. 6, 81 deaths; Calcutta, Jan. 20-27, 30 deaths; Karachi, Jan. 28-Feb 4, 16 cases, 14 deaths; Madras, Jan. 27-Feb. 2, 12 deaths; Rangoon, Jan. 20-27, 33 deaths.
Japan: Formosa, Jan. 1-31, 48 cases, 38 deaths.
Peru: Choisica, Jan. 21-31, 2 cases, 1 death; Lima, 3 cases, 1 death; Mollendo, 2 cases, 3 deaths; Trujillo, 14 cases, 5 deaths.

Society Proceedings

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Boston, June 5-8.

Association of American Medical Colleges, Pittsburg, Pa., March 19.
Medical Association of the District of Columbia, Washington, April 3.
Tennessee State Medical Association, Memphis, April 10.
Medical Association of the State of Alabama, Birmingham, April 17.
Medical Society of the State of California, San Francisco, April 17-19.
Florida Medical Association, Gainesville, April 18.
Medical Association of Georgia, Augusta, April 18.
Mississippi State Medical Association, Jackson, April 18.
South Carolina Medical Association, Columbia, April 18.
State Medical Association of Texas, Fort Worth, April 24-26.
Arizona Medical Association, Phoenix, April 24-25.
Medical and Chirurgical Faculty of Maryland, Baltimore, April 24-26.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY.

Meeting of the Middle Section, held in Chicago, Feb. 24, 1906.

DR. WILLIAM L. BALLENGER, Chicago, in the Chair.

Bullet Wound of Mastoid; Operation; Recovery.

DR. JAMES E. LOGAN, Kansas City, Mo., cited the case of a man, 48 years of age, who was shot in the right ear on Christmas day, 1896. The bullet, 38-caliber, passed through the fleshy portion of the right shoulder and entered the external meatus, lodging in the middle floor of the ear. Facial paralysis on the right side followed immediately. An operation was performed at once for the removal of the bullet, but without success. The middle ear began to suppurate while the patient was still in the hospital. The discharge stopped after six weeks. These attacks of suppuration came on at intervals, followed by periods of cessation, until 1902, after which time the suppurative process continued without interruption. Pain at times was very severe in the region of the ear and on the top of the head, but there were no other symptoms referable to the head, except the constant facial paralysis.

The man was operated on July 6, 1905, by Dr. Bisby, who was unable to locate the bullet. The suppuration process continued with increasing activity, and the patient was sent to Dr. Logan, Dec. 11, 1905. There was very little pain; temperature, 99.2 F.; pulse, 80; tongue coated. The tissues covering the mastoid and extending over the occiput were highly inflamed and a fistulous opening existed just beneath the lobe of the ear, allowing some of the discharge to pass through this channel. Much necrosis was evident, which accounted for the terrible odor emitted from the wound. On September 18 the mastoid was opened just back of the auricle and after thoroughly opening up the infected area and enlarging the meatus, the bullet was located in the floor of the middle ear. Extensive necrosis had taken place, so that all of the anatomic outlines were destroyed. The facial nerve had been severed and the bony roof of the antrum was absent, exposing a part of the dura. Necrosis of the external plate extended as far back as the emissary vein. Dead bone was removed wherever found. A noticeable feature was the excessive hemorrhage that occurred during the operation.

The wound was treated as in an ordinary radical operation. The horizontal incision was sutured and three stitches were taken in the upper portion of the post-auricular incision, the lower portion being left open. The cavity was thoroughly packed with iodoform gauze and the usual external dressing was applied. The patient made a rapid and uneventful recovery.

Anesthesia in Tonsil and Adenoid Operations.

DR. L. C. CLINE, Indianapolis, Ind., suggested the following points for discussion: 1. Is it necessary to use a general anesthetic in all or in the majority of operations for adenoids and tonsils? 2. If so, what is to be the choice of an anesthetic? 3. Can not these operations be done just as efficiently, with less shock and danger to life and postoperative complications, without a general anesthetic?

The author believes that in the majority of cases it is possible to do as clean and as thorough an operation with a local as well as with a general anesthetic. It is his custom to have two assistants. One takes the child on the lap or on the right knee, leaning forward against the patient's shoulder, grasping the body, holding arms of patient at sides, and feet off the floor, if possible. The second assistant grasps the top of the head over the right shoulder of the first assistant to hold the patient firmly. A tongue depressor is passed over the tongue, touching the pharyngeal wall, when the mouth will at once come wide open; the forceps or curette is then placed in position behind the palate. The tongue depressor is now withdrawn partially, if not completely, so that there is no obstruction to breathing. The majority of children, if held firmly in this position, will struggle but little. The curette is passed high up in the vault and moved about until the mass of the tonsil or adenoid is felt to be grasped. A firm sweep with a little rocking motion will remove the mass. A second and third sweep on the sides will complete the work. If forceps are used he usually finishes with the curette.

DISCUSSION.

DR. M. A. GOLDSTEIN, St. Louis, is a firm advocate of the quicker and simpler forms of anesthesia for removing adenoids and tonsils, such as nitrous oxid gas, etc. He does not consider that either the operation for adenoids or for the removal of the faucial tonsil has a sufficiently lengthy technic to place a patient under a general anesthetic. There is a certain amount of risk attending the use of a general anesthetic in these cases.

DR. JOS. C. BECK, Chicago, considers ether the safest general anesthetic for the removal of tonsils and adenoids, particularly where the operator has to dissect out tonsils in children. In adults cocain and adrenal preparations can be used.

DR. EDWIN PYNCHON, Chicago, said the selection of the anesthetic depends entirely on the age of the patient and the condition of the tonsils. In children, who can be held, and in whom the tonsils protrude, the patient should be held firm and rigid, so that the operator can go ahead and remove the tonsils. If the tonsil is buried and has to be removed by being dissected out carefully, a general anesthetic is necessary.

Where a local anesthetic can be used he is in favor of it. He has used local anesthesia in children as young as 6 years for cautery dissection operations. For children over 13 and for adults he uses local anesthesia whenever possible.

DR. DERRICK C. VAIL, Cincinnati, believes in giving a general anesthetic for these operations, because most of them are major procedures and should, if possible, be done in hospitals.

DR. H. W. LOEB, St. Louis, indorsed what the essayist said in reference to the removal of ordinary adenoids and uncomplicated tonsils without general anesthesia. After an experience of ten years in the use of chloroform he has practically discarded it except in cases requiring careful dissection of the tonsils in young children.

DR. JOHN F. BARNHILL, Indianapolis, said that in the average case adenoids can be removed so simply and quickly, and painlessly, under local anesthesia, we are not justified in giving a general anesthetic. However, the personal equation is an important factor.

DR. GEORGE F. KEIPER, Lafayette, Ind., has never found it necessary to have complete anesthesia for the removal of tonsils or adenoids, because when there is complete general anesthesia the danger from the anesthetic itself is greatly increased.

DR. WILBUR W. BULLETTE, Pueblo, Colo., reported the death of a child, 5 years of age, from general anesthesia for the removal of adenoids and tonsils, and since then he has been a little chary in using a general anesthetic for these operations.

Indications for the Submucous Resection of the Nasal Septum.

DR. ROBERT LEVY, Denver, said that a condition which is very commonly responsible for difficult nasal respiration, reflex disturbances or naso-pharyngeal discharge, is the presence of exostoses and enchondroses from the septum. These are nearly always associated with more or less deflection, and it is frequently difficult to determine whether a large spur or ledge alone is sufficient to produce the symptoms, or whether the deflection is sufficient to materially increase the difficulty. In deciding on the treatment and the character of the operation indicated, one must not only determine the nature of the difficulty to be overcome, but must also consider the effect on the patient. Operations should be chosen, all things being equal, with a view to simplicity; the shorter the operation, the less shock and discomfort to the patient.

The window resection presents the ideal method for the correction of certain deformities of the septum. It has none of the elements of mutilation that other operations have, nor is it the simple incision of a structure which so frequently characterizes rhinological operations. A contraindication to all operations on the nasal septum is the existence of syphilis, either hereditary or acquired. He does not wish to detract from the importance and immense value that the submucous resection of the nasal septum offers. It is the most ideal operation for deflected septum. It is, however, an operation requiring a decided perfection of manual dexterity and perfect technic; it also requires more endurance and consequently produces more shock; therefore, before deciding on its performance, the symptoms should be weighed carefully and judgment exercised, so that it can not be charged against rhinologists that they operate because of some simple anatomic abnormality rather than because of definite disturbing symptoms.

Evils of Mouth-Breathing.

DR. C. P. LINHART, Columbus, Ohio, said that in trying to find the origin of many cases of chronic pharyngitis his suspicions were attracted to mouth-breathing as one of the common causes of this complaint. It is only in later childhood, subsequent to hypertrophy of the adenoid tissue in the vault of the pharynx and hypertrophy of the tonsils, that children begin to breathe through the mouth. Children are often housed in overheated and illy-ventilated rooms, and coddled in heavier wraps than are necessary for their health. These hothouse surroundings ill prepare them for the vigorous and sudden changes that they undergo in passing from warm rooms into the winter air. One of the probable evils of mouth-breathing in early life is the raising of the palatine arch by undue pressure from the inhalation of air through the mouth. This excessive arching of the hard palate, which is also the floor of the nose, encroaches on the space in the nose. During development the septum naturally grows so as to fill the space allotted to it in the nose. That space is consequently narrowed in its perpendicular diameter, and it naturally follows that the septum will bend to one side or the other. When a person has a high arched palate one may expect either to find a deflected septum in the shape of a large curve, or a sharp kink or spur." The latter is nearly always seen along the line where the vomer joins the perpendicular plate of the ethmoid. There is no doubt that mouth-breathing, with its consequent high arching of the palate, is responsible for the peculiar shaping of the face seen in many children suffering from adenoids. It is also a factor in causing the protruding and misshapen teeth of the upper jaw.

Any obstructions should be removed by surgical means and the patient encouraged to breathe through the nose. Even later in life, when the bones of the mouth and nose are completely ossified, the openings of the nares can be enlarged by proper breathing exercises. The following axioms are recommended for keeping the nose in a normal condition: Cool living rooms; well ventilated sleeping rooms; cold bath, especially for the neck and spine; dry clothing; simple foods; regular habits; moderate daily exercise, and always breathe through the nose.

Treatment of Hypertrophic and Intumescent Rhinitis.

DRS. E. FLETCHER INGALS and STANTON A. FRIEDBERG, Chicago, drew the following conclusions: 1. The galvano-cautery, when properly used, offers one of the best, if not the best, methods for the treatment of the intumescent and hypertrophic forms of rhinitis. 2. The dangers of middl ear infection have been greatly exaggerated, not any case in the series, and only one among several thousand cauterizations, having come under their observation. 3. The liability to adhesion formation is not great, providing sufficient care is taken not to injure the opposite septal mucous membrane; and providing in cases in which the subsequent swelling is marked a probe be passed between the opposing surfaces in four or five days. 4. A 4 per cent. solution of cocain, according to the formula published, is sufficient in the vast majority of cases to induce complete local anesthesia, three to six applications on a cotton-wound flat applicator being sufficient for this purpose. As a result of experience, especially in cases of marked intumescence, they believe that a spray of adrenalin or suprarenalin, grain 1/8 to the ounce, materially assists in producing anesthesia. 5. The objection that the galvano-cautery destroys too much of the mucous membrane does not obtain, if the cauterization is linear, and if it is done properly, whereby very little mucous membrane is destroyed. 6. Scab and crust formation does not occur any oftener following cauterization than after other nasal operations. In fact, it was noted in but very few instances, and in some of these a change in the spray solution caused a cessation of this trouble. 7. No packing is needed to prevent hemorrhage, and this factor makes the discomfort following the operation very much less than after some other methods. 8. There is very little pain after galvano-cauterization of the turbinated bodies.

Instruments were exhibited and cases presented by Drs. Frank Allport, Joseph C. Beck, William L. Ballenger and Norval H. Pierce, Chicago; H. W. Loeb and Max A. Goldstein, St. Louis; W. R. Dabney, Marietta, Ohio, and John J. Kyle, Indianapolis.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting held Jan. 20, 1906.

The President, DR. P. K. BROWN, in the Chair.

Atheroma of the Aorta.

DR. WILLIAM OPHÜLS showed specimens of atheromatous aorta which had been injected at blood pressure with paraffin. Contrary to Thoma's contention, these showed no bulging of the muscle beneath the atheromatous plaques. Since they were taken from an early stage in the disease, they showed very clearly that the thickening of the intima is not caused by any

primary weakening of the muscularis. The newer histologic methods favor the view that arteriosclerosis is an inflammatory condition.

Genu Recurvatum.

DR. H. M. SHERMAN showed a boy, 15 years old, who suffered from an extreme genu recurvatum. As an infant he had had a spinal kyphosis that had been cured by a plaster jacket. A little later he developed a tuberculosis of the left knee joint. At 8 years an erasion of the joint was done, and two later operations were performed on the knee, in one of which the external popliteal nerve was cut. The deformity of the knee is extreme and is increasing. The boy suffers pain after walking a few blocks. Dr. Sherman stated that in his own experience erasion of the knee joint is practically always followed by a tendency to flexion, which latter takes place even though the joint is in splints. This flexion proceeds to about 35 degrees and then stops. It is much less likely to take place if the continuity of the extensor tissues over the front of the joint is preserved. The patient exhibited extension instead of flexion.

Hydrocyanic Acid Poisoning.

DR. T. C. MCCLEAVE reported a series of cases of hydrocyanic acid poisoning that resulted from an attempt to exterminate roaches in a lodging-house. The poisonous fumes diffused to distant parts of the house, especially through an open clothes-chute. The patient most severely affected stated that after noticing the odor of the gas she felt nauseated and dizzy and then vomited profusely. After a brief period of fullness and whirling in the head she became unconscious. When discovered, shortly afterward, she was extremely cyanotic, the mucous membranes were injected and the muscles rigid. Urine was voided involuntarily. She remained unconscious for about eight hours. She was given artificial respiration, oxygen and the usual cardiac and respiratory stimulants. The use of an adrenal preparation seemed to favor recovery more than anything else did. Headache, nausea and vomiting persisted for some days. The cyanosis also lasted for some days and seemed to be dependent on changes in the blood itself. All those who had assisted in removing this patient from the room were more or less affected, being prostrated with headache, vertigo, nausea and vomiting. The blood examination of one of these showed 4,000,000 red cells, 9,000 leucocytes and a normal differential count. The urine was scant and smoky, but showed no albumin.

DR. RIXFORD spoke of the value of suprarenal preparations in surgical shock. He has seen the blood pressure rise markedly after injections of this substance, and in one case in which strychnin and salt solution had been previously administered he felt confident that the adrenal solution had saved the patient's life.

Operations on Thyroid.

DR. W. I. TERRY reported a series of nine operations on the thyroid gland, with no deaths. Eight of these patients had more or less severe symptoms of exophthalmic goiter and all were improved as a result of the operation. In several the *x*-ray and the serum treatments had been tried previously without success. In all the right lobe was much larger than the left. The operation was essentially that elaborated by Kocher. A local anesthesia was employed. In one patient, while tying the inferior thyroid artery the voice suddenly became squeaky, and it only needed a readjustment of the ligature to free the nerve which was not itself seen. The collar incision was preferred because it gives a better exposure of the gland and because it leaves a better cosmetic result. The individual vessels were isolated and tied. As a rule the stump of the gland was cauterized with carbolic acid and a small drain was left in for twenty-four hours.

Paroxysmal Tachycardia Associated with Exophthalmic Goiter.

DR. P. K. BROWN reported in detail the case of one of the patients operated on by Dr. Terry. A woman, 41 years old, gave a history of paroxysmal tachycardia since she was 12 years old. One of her children also has these attacks. She was observed in several paroxysms of tachycardia, during which her pulse rate reached 280 per minute. Gradually a small goiter developed, associated with tremor, general nervousness, pigmentation of the skin and marked general weakness. Over a period of two years she was treated with various medical remedies, including two kinds of dried serum from thyroidectomized animals and the *x*-ray, but without any other effect than could be accounted for by the rest in bed. After a part of the gland was removed she improved immediately and considerably.

DISCUSSION.

DR. CHENEY said that many cases of exophthalmic goiter seem to run a self-limited course, and if the symptoms can be relieved the disease will terminate of itself. Others must come to the surgeon, but the operation should be a last resort and should not be performed until medical treatment has been given a fair trial.

DR. S. STILLMAN stated that he has under his charge for other conditions two patients who previously suffered from exophthalmic goiter, with enlargement of the thyroid, rapid pulse and tremor. They both recovered spontaneously. He is not in favor of early operations on comparatively mild cases.

DR. DUDLEY TAIT recently visited Jaboulay's clinic in Lyons and saw some of the results that follow sympathectomy. The exophthalmos and enlargement of the thyroid are nearly always improved. Patients with marked nervous symptoms and those with pronounced tachycardia are not considered favorable subjects for this operation. The operation is comparatively free from danger. The difficulty with local anesthesia in this country is that the people do not realize the dangers of general anesthesia and are not tolerant to pain. For this reason many operators find it necessary to use ether in goiter operations.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Treatment of Pneumonia.

In an article in the *Medical Review of Reviews*, Dr. Henry P. Loomis gives an account of the treatment followed out by four of the large hospitals of New York. The general outline is as follows: On admission the patient is usually given calomel in small and repeated doses, followed by a saline cathartic. Local applications are usually restricted to those cases in which there is intense pain and distress. As a general rule, however, local applications are not used. In the height of the disease the diet is composed almost exclusively of milk, either plain or modified to suit the individual case. While the treatment of the temperature is not the same in the different institutions, it is regarded that a temperature of 104 F. or even higher is not regarded as a necessary indication for special treatment, unless there is marked nervous manifestation, increased restlessness, or delirium. The temperature may be combated by cold packs applied to the anterior portion of the chest, or by alcohol sponging. Sponging with tepid water at a temperature of from 80 to 85 F. may be employed to reduce temperature. Tub baths are given only in cases of toxemic pyrexia or in alcoholic cases with marked nervous manifestations. To control the cough, codein is recommended in doses of ¼ to ½ grain (.015-.03) each, every four hours. Heroin may occasionally be given in doses of 1/12 grain each (.005), and in severe cases morphin may be used. Where there is evidence of pulmonary edema, hypodermics of adrenalin are resorted to; also atropin, cupping and stimulation. Insomnia may be a disturbing factor in the course of the disease and may require special treatment.

According to Loomis, oxygen is not so generally given now as formerly. Its use is restricted to those cases complicated by marked dyspnea and cyanosis.

In the treatment of the heart, cardiac stimulants are resorted to when indicated in the different cases. Alcohol, he says, ranks first as a cardiac stimulant; strychnin and digitalis are also used. The latter preparation, however, is not used to the extent that either alcohol or strychnin is employed. Nitroglycerin may be resorted to, according to this author, only occasionally. Saline enemas are of service, especially in

alcoholic cases and in those cases in which nutrition is rapidly failing. Eight ounces of a normal saline solution may be introduced into the bowel through a funnel attached to the end of a catheter. These injections may be repeated once in four hours. If the amount of fluid is limited to 8 ounces it is retained, with marked beneficial results. Loomis, therefore, emphasizes the following important points in the treatment of pneumonia: First, the more general use of morphin hypodermically in the early stages of the invasion of pneumonia, which is the stage in which very many cases present shock to the nervous system from a sudden increased toxemia associated with marked pain almost reaching the pain of pleurisy. [While Dr. Loomis advises the general use of morphin, it should be remembered that this drug locks up the secretion and should be used with great caution.—ED.] Second, the amount of alcohol used in the treatment of pneumonia should be very judiciously and cautiously used. Third, the avoidance of promiscuous drugging of patients, which produces more damage than assistance in a greater percentage of cases.

Bronchial Asthma.

In the treatment of bronchial asthma, J. P. Oliver, in the *New York Medical Journal*, states that the successful treatment consists first, in treatment during the paroxysms; second, in treatment during the intervals; third, in proper attention to sanitation and diet. In the treatment of the paroxysms Oliver recommends morphin sulphate hypodermically in doses of from ⅛ to ¼ grain combined with atropin sulphate in doses of from 1/150 to 1/100 grain, repeated, if necessary, in two or three hours. [In this condition also morphin must be used with care, as there is danger of creating a habit. —ED.] If the patient is a neurasthenic, he recommends apomorphin hydrochlorid in doses of from 1/20 to 1/10 grain, and strychnin nitrate, in doses of from 1/60 to 1/40 grain, the latter preparation being used to prevent depression from the effects of the apomorphin. The constitutional treatment consists of the following combination:

R.	Potassii iodidi	3ii-vi	8-24
	Hydrargyri chloridi corrosivi	gr. ss	03
	Ammonii chloridi	gr. x	65
	Liquoris potassii arsenitis	3ss	2
	Aquæ dest., q. s. ad to make	℥iii	90

M. Sig.: From one teaspoonful to a desertspoonful in a half a glass of water three or four times a day, beginning with the smaller dose, and gradually increasing to the larger dose.

He advises against the use of tobacco in all forms, especially cigarettes. Alcohol should not be used in any form, as it not infrequently tends to provoke severe attacks. The nasal passages and the mouth and throat must be kept in an aseptic condition. The teeth must be carefully cleansed, and if caries are present, they should be properly attended to by the dentist. Flannel should be worn next to the body during the winter and early spring. The sleeping apartment should be well ventilated, especially at night, as the paroxysms not infrequently occur between 2 and 4 o'clock in the morning, consequently all draughts of air should be avoided. Feather beds and pillows for sleeping should not be used. Overeating and late dinners should not be indulged in. F. L. Nelson, in the same periodical, recommends hyoscin hydrobromid given hypodermically in doses of 1/150 grain each, and als adrenalin in doses of from 4 to 8 minims of a 1 to 1,000 solution.hypodermically.

In the internal treatment he recomends hot black coffee, belladonna when innervation is disordered, or when there is spasm of the muscular fibers of the bronchi. Chloral hydrate is of service in some cases, given in large doses, but should be used with care.

In the treatment of the nose in severe cases he recommends a spray of a 4 per cent. solution of cocain in order to rid the passages of the secretions. The administration of this preparation, however, should be carefuly guarded by the physician himself. If the patient is weak he should be given iron, quinin, cod-liver oil, phosphorous and nux vomica, as indicated. To relieve the distressing cough Nelson recommends lobelia and ammonium chlorid.

The patient should be instructed to live in the open air, avoiding winds and locations where there are extreme variations of temperature. Humid atmosphere is bad. The underwear should be of woolen. The functions of the skin and the other excretory organs should be carefuly watched; moderate physical exercise is recommended, and the patient is advised to avoid indigestible and fermenting foods, which are liable to result in the formation of gas, in constipation and chemical irritation. Fats and sweets should be limited, starchy foods must be thoroughly cooked and slowly masticated. Among those articles of food which should be avoided are pork, veal, cheese, malt liquors, heavy wines and champagne. The heavy meal should be taken in the middle of the day, the supper should be light in order that gastric digestion may be completed before the patient retires. Water should not be allowed with the meals.

Cold Fresh-Air Treatment of Pneumonia.

W. P. Northrup, in the *Boston Medical and Surgical Journal*, relates a case of a wandering grip pneumonia involving the entire left side, which was combated by what he calls the cold fresh air treatment. In this case he placed the head of the bed between two open sashes in a bay window. The sashes were lowered and left widely open. As this was in March the room temperature was 40 F. The nurses were compelled to wear heavy wraps night and day. The patient had no oilskin jacket and no cover over the chest, and the arms were left out. The boy's respirations ranged from 35 to 40, and the temperature reached from 104 to 105 during the day; the pulse was seldom above 120. Going on the theory that the boy was overheated and prostrated with poison, Northrup adopted this means of treatment. The fresh air moved the hair on the patient's forehead, passing in at one window and out at the other. Muttering delirium, hot dry skin and a dry tongue were the indications for plenty of water and air, consequently the author adopted this method to cool and dilute the blood stream, to aid the system in unloading its toxic material, and to increase the natural drain. He mentions the fact that patients can not catch cold while the fever is present, and states that with this treatment they are more comforable, bear the disease better, and recover earlier and more perfectly, and with less danger.

Quillaja as an Emulsifying Agent.

According to L. F. Hemmans, in *British Medical Journal*, the value of quillaja as an emulsifying agent is not sufficiently known. The following emulsions are easily prepared and, according to this author, remain permanent on the addition of either alkalies or acids:

To make a chloroform solution:

R.	Chloroformi	℥ix	36
	Tinct. quillajæ	℥iii	12
	Aquæ	℥x	130

M. Ft. emulsio.

Aqua menthæ piperitæ:

R.	Olei menth. pip.	℥iv	16
	Tinct. quillajæ	℥ii	8
	Aquæ	℥x	130

Aqua camphoræ conc:

R.	Pulv. camphoræ	℥i	4
	Spiritus rectif.	℥iii	12
	Dissolve and add		
	Tinct. quillajæ	℥iss	6
	Aquæ	℥iii	90

Emulsio ol. santali:

R.	Olei santali	℥i	4
	Tinct. quillajæ	℥ss	2
	Aquæ	℥i	30

Emulsio olei terebinthinæ:

R.	Olei terebinthinæ		
	Tinct. quillajæ, āā	m. xx	1|30
	Aquæ	℥i	30

Emulsio paraldehyd:

R.	Paraldehyd	℥i	4
	Tinct. quillajæ	m. xx	1|30
	Aquæ	℥i	30

Cure of Eczema by Bier's Hyperemia.

Dr. George Richter, St. Louis, in the *St. Louis Medical Review*, February 24, reports the cure of a case of eczema by

Bier's method of congestive hyperemia. The patient was a boy of 16, otherwise healthy, who belonged to a good family, in which absolute cleanliness is insisted on. When he consulted Dr. Richter, Nov. 22, 1905, there were many fresh and a few older papules and crusts on the forehead, both cheeks, upper and lower eyelids, both lips and in the border of the hair near the right ear. The lesions closely resembled those of impetigo contagiosa. A 5 per cent. salicylic acid salve was prescribed, but by November 25 the trouble had extended over a larger surface. Resorcin salve, 2 per cent., was ordered and the patient was sent to a hospital. The itching had lessened and the condition of the skin had improved about the forehead and eyes, but the eczema had extended over the chin and to the right eye, completely closing the latter. The right ear was also involved. By December 2 the left eye was also involved, though the right eye showed a little improvement. Hebra's salve was applied on chamois and a few days later slight improvement was noted, but this consisted really in the clearing up of some places with fresh lesions in others. A 3 per cent. boric salve was then tried. During all this time the salves were applied once a day and the face was gently cleaned by rubbing it with olive oil. On December 16 Dr. Richter decided that no real progress toward recovery had been made and determined to try the congestive hyperemia advocated by Bier in other inflammatory conditions.

He ordered the face covered with plain vaseline and applied a half-inch silk-woven rubber band with a self-locking device round the throat, just tight enough to cause a slight congestion of the face, but without causing the patient any great discomfort. After about twelve hours there was edematous swelling of the eyelids. The itching disappeared, and within forty-eight hours the effect was remarkable. Sleep was uninterrupted. The temperature never rose above 98.4; the slightly coated tongue cleared up; crusts no longer formed; the oozing of serum stopped and the inflamed border of the affected area vanished. Thirteen days after the application of this method of treatment the eczema had disappeared; no trace of a skin affection could be seen.

Medicolegal

Care Required of Surgeon Volunteering Services.

The Supreme Court of the United States says, in the case of the Guardian Trust and Deposit Company vs. Fisher, that an individual may be under no obligation to do a particular thing, and his failure to act creates no liability; but if he voluntarily attempts to act and do the particular thing, he comes under an implied obligation in respect to the manner in which he does it. A surgeon, for instance, may be under no obligation, in the absence of contract, to assume the treatment of an injured person, but if he does undertake such treatment he assumes likewise the duty of reasonable care in such treatment.

Board of Health Diagnosis Conclusive.

The Court of Appeals of Kentucky holds, in the case of the City of Bardstown vs. Nelson County, an action brought to recover the expenses of a quarantine against smallpox, that the jury should have been instructed that the action of the board of health in diagnosing the case of a person sick and declaring him ill of smallpox, and in directing the quarantine to be established by the city, was conclusive as to it and the fiscal court of the county, and should be so regarded by the jury in arriving at a verdict. Furthermore, the court holds that the trial court should have sustained an objection to and a motion to exclude the testimony of certain witnesses that the man did not have the smallpox, when the witnesses were not and did not claim to be experts and were not familiar with the disease or experienced in its treatment. The prejudicial effect of this testimony, the court says, was not lessened by an admonition to the jury that it might be considered by them in determining the reasonableness of the city's charges for the articles furnished and services rendered by it in preventing the spread of the smallpox. The court is unable to see that this testimony was any more competent for the purpose the jury were told to consider it than it would have been on the question of whether or not the man had the smallpox.

Not Waiver of Right to Object to Disclosures.

The Supreme Court of Indiana says that, in Indianapolis & Martinsville Rapid Transit Co. vs. Hall, a personal injury case brought by the latter party, the plaintiff and his daughter testified to his condition after his injury. While so testifying they stated that the plaintiff made complaint of certain pains to the attending physicians, and also incidentally testified to declarations claimed to have been made by such physicians, while treating the plaintiff, as to the nature and probable result of his injury. Counsel for the company contended that the disclosures by the plaintiff and his daughter, testifying on his behalf, as to his condition and the circumstances attending the visits of the physicians, should have been accounted a waiver of the right to object to said physicians as disqualified, or, in other words, it was claimed that the company was at liberty to examine said professional witnesses generally; and it was particularly contended that they were competent for the purpose of denying or explaining the statements attributed to them. But the court holds that there was no general waiver on the part of the plaintiff of the right to object to the physicians as witnesses for the company. It says further that there were many matters within the company's offer to prove by the physicians concerning which they remained wholly incompetent. The question as to the competency of the physicians as witnesses to explain or deny the statements attributed to them was not presented. It was only in the course of an offer to prove that there was a tender of any such evidence. It is a settled rule of practice that there must be a question asked which is calculated to elicit the testimony excluded to present any question concerning the ruling. Moreover, it is the duty of a party to select the competent from the incompetent in offering testimony, and he can not impose this duty on the trial court. It is too much to expect that a court, without even the aid of an opposite question, shall sift out of a long offer to prove, consisting largely of that which is incompetent, an item of proposed testimony which would only be admissible because of certain testimony which had been previously offered by the other side. The sustaining of an objection to the question in such circumstances is not error.

Construction of Health Policy as to Blood Poisoning.

The Supreme Court of North Carolina says, in the case of Jones vs. Pennsylvania Casualty Company, that the plaintiff, a holder of a health policy, received a small scratch on the hand, which began to inflame, blood poisoning developed and the arm was of necessity amputated. The policy contained a definite stipulation for indemnity in case of disability arising from certain specified diseases, blood poisoning being one expressly named. But, having given this assurance of indemnity, from which, this disease being evidently the direct and controlling cause of the disability, as a matter of first impression the right of the plaintiff to recover would seem to be clear, the policy then took up the matter of provisos by way of restriction, and stipulated further: 1. That the policy should not apply to any illness or disease whatever except those named. 2. That it should not apply to any disease which was complicated with, or resulted from, any disease not therein named, etc. 3. Nor to any disease or illness which resulted from injury, etc. 4. Nor, in effect, to any disease which developed or resulted from those diseases that were named, etc. There were many other limitations and restrictions in the policy, but those set out were enough to show that, if these provisos could prevail, blood poisoning was entirely withdrawn from the operation of the policy, and any and all stipulation for indemnity concerning it effectually removed. Now, so far as the court is informed, blood poisoning is not considered as one of the primary or idiopathic diseases. It is a toxic condition of the blood, caused either from or through a surface wound or some internal lesion or from the breaking down of tissue incident to an existent or precedent disease, and thereby producing suppuration. As to this disease, therefore, these provisos removed every possible condition where the disease could occur, and if upheld would, as stated, entirely set aside the definite contract for indemnity contained in a former clause of the policy. Such a result could not be permitted and is not sustained by authority. It is established doctrine in construing these policies that doubts shall be resolved in favor of the insured. Another principle applicable

to this case, and equally well established, is that, while clauses in a contract apparently repugnant must be reconciled if it can be done by any reasonable construction, yet a proviso which is utterly repugnant to the body of the contract and irreconcilable with it will be rejected; likewise, a subsequent clause irreconcilable with a former clause and repugnant to the general purpose and intent of the contract will be set aside. The court's conclusion, therefore, is that, as to blood poisoning, the various restrictive provisos in this policy were entirely repugnant to the definite stipulation of indemnity contained in the main body of the contract, where contrary to the general intent and purpose of the policy and could not avail to defeat the plaintiff's recovery of indemnity.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.
March 3.

1 *Epidemic Cerebrospinal Meningitis. W. M. Leszynsky, New York.
2 *The Heart in Tuberculosis. W. Hutchinson, Redlands, Cal.
3 Massage and Motion in Fractures. G. Norström, New York.
4 Syphilitic Empyema of the Accessory Sinuses of the Nose. J. H. Abraham, New York.
5 Splenic Leukemia. H. J. Thompson, La Porte, Ind.
6 *Aspiration of the Tympanic Cavity After Paracentesis; a Valuable Aid in the Treatment of Acute Otitis Media. P. Fridenberg, New York.

1. **Epidemic Cerebrospinal Meningitis.**—Leszynsky presents a clinical report and an analysis of the special symptoms in 30 cases representing nearly all types of the disease. The mortality was 50 per cent. Good nursing and proper feeding were the most important features in the treatment. When the weather permitted, the patient was kept in the open air the greater part of the day. Hot saline rectal irrigation or hypodermoclysis often proved extremely valuable in improving the patient's vitality. The hot bath, given several times a day, usually allayed excessive irritability and delirium, and temporarily improved the patient's general condition. The ice-bag was applied to the head and neck in every case, but Leszynsky doubts its utility. Whisky, strychnin, digitalis, morphin and ergot were employed when indicated. In several acute cases salicylate of sodium was administered by rectum, but without benefit. Lumbar puncture was performed one or more times in every case, either for diagnostic or therapeutic purposes. It was never followed by unpleasant results. In two of the patients who recovered, lysol solution was injected into the spinal canal. In one instance a 1 per cent. solution was used without apparent effect. In the other a 10 per cent. solution was used, and it seemed to have some influence in hastening recovery. It was also used in several of the fatal cases without benefit.

2. **Heart in Tuberculosis.**—Hutchinson has found, after careful investigation, that a weak, undersized, muscular deficient heart, indicated by a weak, rapid pulse and defective first sound, approaching embryocardia, is one of the most constant and significant conditions present in consumption This condition, in a considerable percentage of cases, precedes the development of tuberculosis. The earlier in the disease this condition presents itself, and the more striking its degree, the more serious the prognosis. This undersized and inadequate heart is normal at about the period of puberty. Hutchinson urges that the condition of the heart should be the principal guide in the diagnosis, prognosis and treatment of consumption. A persistent rapid pulse, without other ascertainable cause, should always rouse suspicions of incipient tuberculosis.

6. **Aspiration of Tympanic Cavity.**—The procedure described by Fridenberg is the evacuation by suction of the tympanic cavity immediately after cutting the drum. For this purpose he uses a small glass bulb about five-eighths of an inch wide, shaped like an olive, with a very blunt tip. The neck of the glass bulb is stuffed with sterile cotton and attached to a short rubber tube after both bulb and tube have been thoroughly boiled. Immediately after the paracentesis is made the glass bulb is pressed against the external meatus, plugging the canal hermetically. Suction is then applied and gradually increased until there is a flow of fluid from the middle ear and the glass bulb fills more or less. Fridenberg has found the effects of this aspiration strikingly gratifying. There seems to be less pain after the paracentesis than when an incision only is made. The otitic pain is more promptly and lastingly relieved. A second incision of the drum is less often required and drainage is much more free.

American Medicine, Philadelphia.
March 3.

7 *The Public Health Laboratory. F. F. Wesbrook, Minneapolis, Minn.
8 *Cause of Epilepsy. O. Lerch, New Orleans, La.
9 *Chronic Urethritis and an Improved Method of Applying Medication to the Urethra. E. G. Ballenger, Atlanta, Ga.
10 Practical Side of Mosquito Extermination. H. C. Weeks, Bayside, L. I.
11 Effect of Posture on Cardiac and Vascular Murmurs. R. D. Rudolf, Toronto, Canada.
12 Disinfection of Ships. J. D. Long, Manila, P. I.

7. **Public Health Laboratory.**—Wesbrook discusses the function and scope of the public health laboratory, and takes occasion to group laboratory work and laboratory workers in the classes in which the present demands and growth seem to place them.

8. **Cause of Epilepsy.**—Lerch advances the theory that the basis of epilepsy is a diseased brain, congenital or acquired. The widely accepted theory of autointoxication he considers, with the rest of etiologic factors, as a remote cause producing congestion and edema. He thinks that the large number of patients in whom a neuropathic constitution and epilepsy can be traced directly, and the large variety of lesions that are found in the epileptic brain favor the correctness of his theory. He says that the same train of symptoms, occurring under the most varied conditions, in patients of all ages, uninfluenced by sex, climate and disease, calls for one direct cause to produce the attack. This cause is congestion and edema.

9. **Treatment of Chronic Urethritis.**—Ballenger's method consists in the employment of a sound which has been coated with the solidified ointment of Unna, which contains, in addition to silver nitrate and cocoa butter, balsam of Peru and white wax, to harden the ointment after it has been smeared on the sound. To facilitate the hardening of the ointment, the sound is cooled in ice-water. This method of treatment has proved so satisfactory that Ballenger has adopted it as a routine method of applying medicine to the urethral canal in any chronic condition.

The sounds are prepared in the following manner: From 2 to 3 gm. (30 to 45 gr.) of silver nitrate or the medicament desired, is powdered and mixed with 180 gm. (℥vi) of melted cocoa butter, which is placed in a tall wide-mouth bottle. It should be sterilized occasionally by boiling in a water bath. When the mixture is to be used it is placed in hot water or on a steam radiator until it liquefies. The largest sound that can be passed easily and another three sizes smaller are sterilized and placed in a pitcher of ice-water. The large sound is lubricated, introduced, and left in place for from three to eight minutes, according to the conditions. The smaller one is dipped into the melted ointment, withdrawn and manipulated for a moment while it cools to obtain a uniform layer, and is then placed in the ice-water. The cold hardens the cocoa butter and the sound may be introduced before this melts, while the canal is cool from the larger sound which is passed first, to prepare the way by overcoming any spasmodic obstruction, and to dilate the stricture, if one exists. The stimulating action of the cold is also desirable. The canal may be irrigated before each treatment. Massage along the urethra can be done painlessly by steadying the sound with the right hand to furnish counter-pressure against the fingers of the left, which devote special attention to the bulb and indurated points. Force of any kind should never be used, nor is the treatment applicable to any acute condition. The intervals between treatments vary from one to four days, according to the reaction which follows and the condition being treated. The strength of the ointment is increased as the urethra becomes more tolerant.

Boston Medical and Surgical Journal.

March 1.

13 *The Medical Profession and the Medical Journals in Relation to Nostrums. F. Billings, Chicago.
14 *Ready-made Remedies. F. G. Wheatley, North Abington.
15 *Photophobia: A Nasal Reflex. E. D. Spear, Boston.

13-14.—See abstract in THE JOURNAL, Jan. 20, 1906, page 220.

15. **Photophobia a Nasal Reflex.**—Spear contends that photophobia is a nasal reflex. He says that it is a common experience to have a bright light induce sneezing. Hence, there must be a degree of hypersensitiveness of the nasal membranes. When light causes one to blink or to wrinkle the forehead, the nose is at fault rather than the eyes. He says that the so-called hay-fever paroxysms form an exaggerated type of physiologic reflex. These may include all the normal nasal reflexes, lachrymation, sneezing, coughing, hiccough, and sometimes vertigo, with nausea and retching. He cites the case of a bellboy who was obliged to await calls in front of a row of electric arc lamps. The young man was unable to endure what had become a source of torture to him without constantly shading his eyes with his hands. Examination showed no defect of vision, but the nose was obstructed throughout the middle fossæ by large hypertrophied turbinals. Direct applications to these swellings produced none of the nasal reflex symptoms. Several weeks of treatment, however, brought about a normal degree of sensitiveness, and as the young man's condition improved, a bright light would bring on a paroxysm of sneezing, the onset of which was delayed longer each time until finally the light ceased to cause reaction.

New York Medical Journal.

March 3.

16 *A Point in the Technic of Breast Amputation for Cancer. R. F. Weir, New York.
17 Two Cases of Angioneurotic Edema with Associated Nervous and Mental Symptoms. T. Diller, Pittsburg.
18 Sporadic Trichinosis. D. Bovaird, Jr., New York.
19 Retroanterograde Amnesia. A. Gordon, Philadelphia.
20 Contribution to the Study of Pseudoeneuritis Optica. M. Talmey, New York.
21 Gonococcic Infections and the Physician's Responsibility. J. B. Clark, New York.
22 Theory of Protein Metabolism O. Folin, Waverley, Mass.
23 Suggestions on the Nature and Treatment of Rheumatism. W. E. Deeks, New York.

16. **Cancer of the Breast.**—Before the radical operations for the removal of a cancerous breast came into vogue, Weir found that in following up the enlarged lymph glands to the very point where the axillary vessels pass under the clavicle, he could often carry his finger under the clavicle to one of the sides of the vessels by pulling the arm vertically upward and thus reach glands, etc., well under and slightly above the clavicle. When no enlarged glands can be felt through the skin of the neck, the little finger or the forefinger can be carried under or beyond the clavicle its full depth into the neck, and the supraclavicular space behind the sternomastoid muscle can be fully explored. If enlarged glands are found in this region Weir makes the customary incision along the edge of the clavicle to the root of the sternomastoid muscle and up a short distance along its posterior border. The space is then cleared of glands and fat tissue. If nothing is found the breast wound is closed and a small cigarette drain is placed in the hole bored alongside the vessels, to be withdrawn at the end of twenty-four or forty-eight hours.

St. Louis Medical Review.

February 17.

24 Vascular Hypertension. J. R. Lemen, St. Louis.
25 Operative Treatment of Chronic Nephritis: A Third Communication. (Concluded.) R. Guiteras, New York.

Lancet-Clinic, Cincinnati, Ohio.

March 3.

26 *Fractures About the Elbow Joint. W. D. Haines, Cincinnati.
27 *Pyloroplasty with the McGraw Ligature. J. H. Carstens, Detroit, Mich.
28 Diseases, Diagnosis and Surgical Treatment of the Right Upper Abdominal Cavity. (Concluded.) B. M. Ricketts, Cincinnati.
29 Diagnosis of Surgical Diseases of the Kidney. J. G. Sherrill, Louisville, Ky.

26.—See abstract in THE JOURNAL, Jan. 13, 1906, page 146.

27. Id.—Nov. 4, 1905, page 1435.

Maryland Medical Journal.

February.

30 Ancient and Modern Theories of Age. M. L. Price, Baltimore.
31 *Medical Support of Nostrums. S. H. Adams, New York.

31. **Medical Support of Nostrums.**—In discussing this question Adams points out that most patent medicines originate with the medical profession. A physician devises some combination of drugs which he uses with effect, real or imagined, in his practice. The mixture acquires a considerable local fame. Finally it occurs to the doctor that he can make a good thing of that by selling it beyond the little circle of his immediate practice. So he goes to the United States Patent Office and obtains, not a patent, for that would necessitate his giving out the formula, but trade-mark registration. Such is the origin of peruna and many other nostrums. Again, medical testimonials are very easy to get in the so-called ethical field; but they do not seem very impressive when one comes to look into them. The geographical location of the physicians who lend their names to testimonials is interesting, perhaps even significant. Curiously enough, says Mr. Adams, it is just the same class of places that furnishes the familiar "God-bless-peruna" letters which appear in the dailies. If this has any special meaning, it would seem to be that the order of intelligence which prevails in the small town finds similar expression both in the layman and the physician. Foreign testimony from men of standing is much easier to obtain than domestic, because these men, as a rule, are not known in America, nor do they care anything for America.

Adams believes that it might be worth while for physicians in each city to know just which of their fellow practitioners are prostituting themselves to this trade. He suggests that THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION might supplement its list of the proprietary associations of America by a list of physicians owned by the proprietary associations. He goes on to say that a vital weakness in the medical opposition to "patent medicines" is the lack of an intelligent idea by the profession of the forces it is fighting. The medical profession is dangerously swift to jump at conclusions. It is fighting a very keen and powerful enemy in the "patent-medicine" man. Its most effective weapon is the truth, and the profession has not found it yet. Through reckless statements it is in danger of forfeiting that public confidence which should be its most potent ally. Mr. Adams says: "Find out where the foe is before you strike. Don't hit out with your eyes shut."

He points out that the greatest present hope is in legislation, and suggests that every medical organization in the country appoint a committee on legislation, made up of its most representative members. The Proprietary Association of America is rent with dissensions. There was never before so brilliant an opportunity for the enemies of fraudulent nostrums. This spring there will be introduced in many state legislatures a patent-medicine bill looking to an effectual guardianship of the public health. Mr. Adams believes that if every physician will stand behind this bill, not alone as a physician, but as a citizen with a vote and a voice for the betterment of his commonwealth, the nostrum business will be so restricted within the bounds of decency and fair dealing that fraud and poison will become unprofitable in those markets. If the medical profession will mobilize its forces and for once speak its mind in the legislative halls, it will result in the effectual crippling of a traffic which takes its profit from suffering and death.

St. Louis Courier of Medicine.

February.

32 *Is Syphilis or Mercury Responsible in the Etiology of Dementia Paralytica and Locomotor Ataxia? O. L. Wolter, St. Louis.
33 Tumors of the Cerebellum. (Concluded). E. A. Babler, St. Louis.
34 Treatment of Respiratory Diseases in Children. J. Zahorsky, St. Louis.
35 Posterior Basic Meningitis. L. M. Warfield, St. Louis.

32. **Syphilis or Mercury.**—Wolter holds that the theory that paralytic dementia and tabes, in 90 per cent. of all cases, are meta-syphilitic conditions is not so sound as the theory that

the diseases are usually a metamercurial condition. He does not deny that paretics and tabetics are syphilitic, but believes that it is equally true that they have been mercurialized. As the result of considerable study he inclines to the belief that mercury and not syphilis is responsible in the etiology of dementia paralytica and locomotor ataxia. He says that there are important reasons for the belief that syphilis plays a minor rôle in the etiology of sclerosis of the brain and cord. Although the negro is very prone to contract syphilis, paresis and posterior spinal sclerosis are seen rarely in the colored race. The average negro most frequently receives no treatment for lues, and the most severe secondary and tertiary lesions are found in the colored man. Having become a syphilitic, he allows the disease to run a typical course without interference. If he does take mercury it is with no system; it is taken irregularly and for no prolonged period of time. Yet, in spite of all this, he does not become the victim of paresis and tabes. On the other hand, the man of brains, the professional man, the highly educated man, falls a ready victim to paresis. The requisites of thorough anti-syphilitic treatment are brains and money, and, since these are the essentials in obtaining the treatment, Wolter believes that there is the reason why paretics and tabetics are usually individuals of prominence. Wolter also discusses the reasons why paresis takes a long time to develop; how mercury may produce the pathologic changes found in paresis and tabes, and the fact that anti-syphilitic treatment does no good, but actually does harm, pointing out always that the syphilitic etiology of the diseases under discussion appears questionable.

Journal of the Medical Society of New Jersey, Newark.

February.

36 *Considerations Regarding Prescription Writing To-day. F. M. Corwin, Bayonne, N. J.
37 Obstetric Technic in Relation to Subsequent Pelvic Manifestations. J. C. Applegate, Philadelphia.
38 Examination of the Eyes and Ears of School Children by School Teachers. L. Emerson, Orange, N. J.

36. **Prescription Writing To-day.**—Corwin discusses the reasons for the decadence of the old-time prescription and the ascendancy of the prescription calling for proprietaries and "patent medicines." He says that a peep at the shelves and into the closets behind the prescription counters of drug stores reveals a vast array of broken original packages of the wares of the different manufacturing pharmacists, of more or less repute, who have managed, by dint of persistent pushing of literature and samples, to get their preparations prescribed by physicians. Many of these proprietary articles are ethical and many are not. Of those which might in themselves be classed as ethical, some are exploited in a manner which puts them without the class, and makes their use by the medical profession entirely inadvisable.

One of the first and most apparent reasons why physicians prescribe any of these remedies, says Corwin, is that the manufacturing pharmacist can and does turn out a better article than the average retail pharmacist. The combination and concentration of capital, the possession of special apparatus, the employment of skillful chemists, the laboratory facilities for research and experiment, the procuring and handling of crude materials in large quantites, enable the manufacturer of these proprietary articles to turn out a product which shall be as pleasing as possible to the eye, nose and palate. Furthermore, it takes a number of years for a really meritorious formula to find its way into the United States Pharmacopeia, or in other words, to become official. The result is that until a given preparation has been put in the Pharmacopeia, the latter published and in the hands of pharmacists, the mixture obtained in twenty different stores may have been made from almost as many different formulas. Even if each store is provided with the same formula, the conditions behind the prescription counter will readily explain why the products differ. Corwin places much of the blame for the undesirable preponderance and unmistakable attractiveness of these factory-made products on the Pharmacopeia.

Speaking of the objections to prescribing these proprietary articles, Corwin says that the effect on the mind and resourcefulness of the prescriber is detrimental, narrowing, blunting and destructive of individuality, of the ability to adapt a prescription to the special case before him. The result is that prescription writing is liable to become a lost art. He points out that not only is it the duty of the physician to shun these offending articles, but to do all he can to discourage their use. As soon as one of the monopolized chemicals, under the coined name, becomes recognizable and is put in the market under its chemical cognomen, physicians should take pains to familiarize themselves with the fact, and to make use of the preparation. The use of but one word, and that a coined word, for the name of a remedy is objectionable in that it readily catches the eye, and is in turn learned by patients. The consequences to the latter are likely to be disastrous because, if the remedy works well, especially for the relief of some frequently recurring condition, such as headache, the patient falls a ready prey to the drug.

University of Pennsylvania Medical Bulletin, Philadelphia.

January.

39 *Has Experience Sustained the More Radical Operations for Cancer of the Uterus? J. G. Clark, Philadelphia.
40 Complications Arising in Sixty-three Consecutive Cases of Ovarian Tumors, with Special Reference to Malignancy. C. C. Norris, Philadelphia.
41 Sketch of the Life of Thomas Bond, Clinician and Surgeon. J. A. Scott, Philadelphia.

39. **Radical Operation for Cancer of Uterus.**—Clark states that while the operative statistics up to this time must dampen the enthusiasm of even the most ardent optimist, on the other hand, they are sufficiently encouraging to cheer even the pessimist if he will only give the study of ultimate results an unprejudiced critical review. He believes that more is lost than is gained in the radical operation when the glands are painstakingly extirpated, and that to remove here and there a palpably large gland will certainly not promote the patient's interest so far as a radical cure is concerned. Of all the various methods of operating employed he still adheres to the abdominal one, removing all possible tissue in the vicinity of the primary site of the growth, and using the cautery rather than the knife. In general, he follows the principles laid down by Wertheim, stopping short, however, with the removal of a considerable cuff of vagina with the uterus, and as much parametrium as possible, not prolonging the operation by a search for glands. He says that when one takes into consideration the fact that there is no regularity of metastatic distribution, that in even the earliest cases metastasis may have occurred, and that when the lower accessible glands are involved, the upper inaccessible glands, with the exception of only 13 per cent., are also involved, little argument is left in favor of the extensive dissection of the glands with the largely added mortality that must necessarily follow this ste, from shock, infection and other complications.

American Journal of the Medical Sciences, Philadelphia.

February.

42 *Extermination of the Mosquito. A. H. Doty, New York.
43 Cystinuria. W. McK. Marriott and C. G. L. Wolf, New York.
44 *Present Status of Blood Cryoscopy in Determining the Functional Activity of the Kidneys. E. Beer, New York.
45 Case of Hypernephroma. W. J. Taylor, Philadelphia.
46 Case of Double Pyonephrosis. M. Krotoszyner, San Francisco, Cal.
47 Abscess of the Brain. H. F. Stoll, Hartford, Conn.
48 Primary Cavernous Sinus Thrombosis. W. Zentmayer and T. H. Weisenburg, Philadelphia.
49 *Case of Myxedema with Ascites. A. E. Hertzler, Kansas City, Mo.
50 Spinal Cord Degenerations in a Case of Acromegaly, with Tumor of the Pituitary Region. A. M. Barrett.
51 Operations for Relief of Pelvic Diseases of Insane Women. L. Broun, New York.
52 *Researches on the Blood of Epileptics. B. Onuf and H. Lograsso, Sonyea, N. Y.
53 *Gunshot Wounds of the Abdomen. G. T. Vaughan, Washington, D. C.
54 *Complete Amputation of the Thigh, with Replantation. A. Carrel and C. C. Guthrie, Chicago.
55 Tetany. C. P. Howard, Baltimore.

42.—This interesting article covers practically the same points as the article by Dr. Doty which appeared in THE JOURNAL, Aug. 26, 1905, page 585.

44. **Status of Blood Cryoscopy in Determining Functional Activity of Kidneys.**—Experiments have convinced Beer that cryoscopy of the blood gives but little absolutely accurate information as to the present activity of the kidneys. The kidneys, though the most important organs in regulating the molecular concentration and osmotic pressure of the blood, are

not the only organs concerned with this intricate process. An anatomically normal or almost normal kidney may be so disturbed in its functional activity as to appear seriously diseased, being temporarily incapable of excreting its quota of molecules. The concentration of the blood may be normal, equal —.56 C., even though the kidneys are functionally inactive and anatomically very badly diseased. The concentration of the blood may be increased to —.60 C. or higher even though the second kidney is anatomically normal but is suffering from a functional disturbance produced by nervous reflexes, or by toxins which come to it through the circulation from the other diseased kidney. The concentration of the blood may be markedly increased, even though both kidneys are in good condition.

In bilateral disease if nephrectomy is done with normal concentration the operator may remove in the diseased organ the majority of the functioning tissue of the kidneys and thus bring on uremia and death, because the renal tissue left in the patient is inadequate for the excretory work. The list of patients who have survived a nephrectomy, despite high molecular concentration, —.60 C., is steadily growing. Patients with normal freezing point do not necessarily survive the operation and are not in any way insured against subsequent uremia. In a large number of cases high concentration corresponds to bilateral kidney tissue, but as yet it is impossible to decide which cases of high concentration are not of renal origin, and, vice versa, which patients with low concentration are suffering or likely to suffer from renal insufficiency.

49. **Myxedema with Ascites.**—The interesting points in the case reported by Hertzler were the presence of ascites and of leukoplakic spots on the backs of the hands.

52. **Blood of Epileptics.**—Onuf and Lograsso undertook the study of the formed elements of the blood with the purpose in view of determining whether there existed any connection between the behavior of the formed elements and the epileptic seizures. Nineteen cases were selected, 8 men and 11 women, all of whom had been without bromids for a period of at least two months preceding the examination, and all of whom were idiopathic cases, so far as could be determined. They found that a leucocytosis may already be present directly before a seizure, and, if so, is then not a purely secondary phenomenon produced by the seizure. Furthermore, a grand-mal seizure need not necessarily be preceded or ushered in by a leucocytosis. These observations teach the important fact that there is no absolute parallelism between seizure and leucocytosis. They also show that the leucocytosis is, in part at least, independent of the seizure.

53. **Gunshot Wounds of Abdomen.**—In Vaughan's series of 14 cases of gunshot wounds of the abdomen there were 8 cases of wounds of the small intestine, 6 of the large intestine (5 of the colon and 1 of the rectum), 5 of the diaphragm and pleura, 5 of the liver, 2 of the stomach, and 2 of the kidneys. Several patients had a number of wounds in one organ, while in others several organs were wounded. One patient had 11 bullet holes in the intestine, while another had perforation of the liver, stomach and colon. One of the patients was not operated on, 1 was operated on late, and 12 were operated on in from one to twenty-eight hours after the reception of the injury. Nine patients died, a mortality of 64 per cent. In 6 cases the cause of death was hemorrhage, in 1 case peritonitis, in 1 case exhaustion, and in 1 case shock or the anesthetic, or both. Vaughan says that he knows of nothing more which could have been done to save the 6 patients who died from hemorrhage, except to have operated sooner.

54. **Amputation of Thigh with Replantation.**—Carrel and Guthrie attempt to show that a permanently successful replantation of an amputated thigh is possible. The experiment was performed on a dog. The thigh was amputated at the union of its lower and middle thirds. The limb was removed and enveloped with sterilized moist compresses. After a few minutes the amputated portion of the limb was placed on the operating table close to the remaining stump of the thigh. The continuity of the artery and of the vein were immediately re-established by end-to-end suturing. Absolutely no blood escaped from the vessels at the lines of anastomoses. The pulsations of the popliteal artery immediately became normal and the femoral vein filled with circulating dark blood. The two ends of the bone were closely approximated and sutured together with silver wire. The sciatic nerve was sutured with silk, and the muscles, aponeurosis and skin with catgut. A gauze and collodion dressing was applied. Afterward the lower portion of the abdomen, the hip, the thigh and the leg were enveloped with cotton and the large plaster-of-Paris bandage.

Twenty-four hours after the operation the animal was in good condition and the replanted foot was very much warmer than the other foot. There was considerable swelling, however, which was thought to be due to the inactivity of the vasomotor nerves. Fifty hours after the operation the dog was killed, the development of gangrene being inevitable. The failure of the operation was due only to a fault of technic. A circular constriction produced by the gauze collodion dressing had stopped the venous circulation. The thigh and the leg were dissected. There was no stenosis of the vessels. The anastomoses were perfect. The cut ends of the muscles had united satisfactorily. The connective tissue of the thigh and of the popliteal region seemed normal, while in the leg and foot below the ring of constriction it was markedly infiltrated and edematous. The veins of the foot and leg were extremely dilated and filled with coagulated blood.

Indiana Medical Journal, Indianapolis.

February.

56 Camp Morton During the Civil War. P. H. Jameson, Indianapolis.
57 The Regimental Surgeon. L. D. Waterman, Indianapolis.
58 Eyesight, Literature and Civilization. F. C. Heath, Indianapolis.
59 *New and Rational Operation for the Correction of Prominent Ear. J. T. M'Shane, Indianapolis.
60 Medical Treatment of Postoperative Peritoneal Adhesions. T. B. Eastman, Indianapolis.
61 The X-Ray in the Treatment of Certain Diseases of the Skin. F. Wise, New York.

59. **Operation for Correction of Prominent Ear.**—The ears of the young man whose case is reported by McShane extended at right angles from the head and measured at the distal margin one inch and three-quarters. An elliptical section of integument two inches in length and something more than a half-inch in width was removed from the posterior aspect of the ear. The connective tissue was then carefully dissected away and the perichondrium roughened by the use of a curette. Strong catgut sutures were used in the cartilage in such a manner as to fold it on itself. The needle was introduced into the cartilage near the margin of the denuded section and thrust in as deeply as possible, care being taken not to pierce the skin on the anterior surface of the ear. The needle was returned and brought out an inch and a half from the point of insertion. The needle was then carried across the denuded area and a similar hold was taken near the margin of the skin on the opposite side. Four or five of these sutures were introduced, and when they were tied the ear presented the normal anterior ridge in its proper position, the ear was contracted to the normal size and at the same time brought back to the proper distance from the head. Silk sutures were used in bringing the margins of skin together, and the catgut sutures were thus buried. The ears were dressed with antiseptic gauze and cotton compresses and bandaged close to the head so as to relieve the sutures of as much tension as possible. Two weeks later all dressings were removed. The ears are normal in appearance and size.

Medical Fortnightly, St. Louis.

February 10.

62 *Foudroyant Gangrene. W. H. Wilder, Birmingham, Ala.
63 Tuberculosis, Socially and Financially. C. A. Boice, Washington, Ia.
64 Present Status of the Alkaloidal Movement. W. C. Abbott, Chicago.
65 Tuberculous Adenitis of the Neck. R. J. Christie, Jr., Quincy, Ill.
66 Chronic Nephritis in the Aged. J. P. Matthews, Carlinville.

62. **Foudroyant Gangrene.**—Two cases of this kind are reported by Wilder. The first patient dropped a pistol from his pocket, and the fall caused the weapon to explode, the ball entering the fleshy part of the calf of the right leg on the inner side, four inches below the knee, passing through the

limb behind the bones which were not injured, and coming out two inches higher on the outer surface. The patient, not believing that his injuries were dangerous, continued to work for two days before seeking medical attention. When first seen the wounds looked healthy, the circulation was good, there was little swelling, but much pain. The leg was dressed antiseptically. The following morning there was more swelling. Hot applications were applied and changed frequently for twenty-four hours, at the end of which time the pain had increased. The pulse was 120, temperature 102 F., and marked gangrene had made its appearance. The thigh was amputated rapidly at the junction of the middle and upper third, but the patient died six hours after the operation, just four days after the injury.

The second patient sustained a compound fracture of the left radius near the wrist. On the fifth day following the injury evidences of sepsis set in about the hand, which was freely incised and dressed in hot bichlorid gauze. During the next twenty-four hours the pulse ran up to 116, and the temperature to 104 F. The skin on the arm began to show a dusky brown color which spread rapidly toward the shoulder, crepitation in the cellular tissues could be felt, and gangrene was evident. Amputation was advised, but was not consented to until four hours later, when the arm was amputated near the shoulder. The stump was left wide open and dressed with hot bichlorid gauze for ten days. After a long and stormy convalescence the patient made a good recovery.

American Journal of Obstetrics, New York.

February.

67 Toxemia of Pregnancy. I. Strauss, Ithaca, N. Y.
68 *Surgical Treatment of Retrodisplacements of the Uterus. J. W. Bovée, Washington, D. C.
69 *One Hundred Consecutive Abdominal Sections, Without a Death. W. J. S. McKay, Sydney, Australia.
70 *Fibroma Molluscum Gravidarum; New Clinical Entity. S. M. Brickner, New York.
71 The Dermatoses of Pregnancy. S. Pollitzer, New York.
72 *Abdominal Pregnancy, Persisting Beyond the Normal Period of Gestation. C. A. L. Reed, Cincinnati.
73 *Further Consideration of Mesenteric Cysts. O. G. Pfaff, Indianapolis.
74 Treatment of Face Presentations. A. P. Clarke, Cambridge, Mass.
75 Treatment of Puerperal Eclampsia. E. G. Zinke, Cincinnati.
76 Intermittent Hydrosalpinx. P. Findley, Chicago.
77 Pus Collections in the Female Pelvis. H. Grad, New York.
78 Case of Melena Neonatorum. A. E. Blount and S. M. Gardner, Chicago.

68. **Retrodisplacements of Uterus.**—Bovée insists on the utmost importance of being absolutely familiar with the conditions, pathologic and anatomic, in each individual case. Inasmuch as no one surgical operation is applicable to every case, the surgeon who excludes from his curriculum some of the procedures that are based on principles that do not violate laws of function and pathology, and sees no necessity for anything but shortening round ligaments or ventrosuspension, or what not, will necessarily fail from misapplication. Many cases will need no operation on the uterus for the displacement *per se;* but many times diseased and adherent appendages will demand appropriate treatment. This may be, indeed in a large proportion of cases will be, ablation. The careful observer will find that this procedure, properly executed, has remedied the displacement. Bovée warns the pelvic surgeon against the improper application of ligatures in removal of the appendages, to-wit, placing them so as to shorten the posterior surface of the broad ligament or to approximate the distance between the uterine cornua and the sacral promontory.

He suggests that a uterine body very jagged and bleeding on its posterior aspect after separation of adhesions, as a rule, should be removed if the appendages are sacrificed. Future trouble from new adhesions with the subsequent retroversion, endometritis, etc., is so frequently experienced that it may be confidently expected when this rule is violated. When tumors are plainly the cause of retrodisplacement and are removed, due care should be taken to learn whether or not this operation does not entirely remedy the condition. Usually it will do so, and in such an event nothing further should be done. A floating spleen should be removed, a stomach that mechanically acts as an etiologic factor should receive appropriate treatment, as should a lacerated cervix, endometritis, injuries to the pelvic fascia, subinvolution and cervical hypertrophy in any diameter. The sound principles to employ as guides are, principally, address study and treatment to the existing abnormalities, whether of a congenital or an acquired variety, and to regard the displacement as of secondary importance.

69. **Prophylaxis in Abdominal Sections.**—McKay emphasizes the importance of prophylactic measures in cases of abdominal sections. He believes that the good results obtained by operators are attributable entirely to the careful preparation of the patient before operation.

70. **Fibroma Molluscum Gravidarum.**—Brickner describes this condition as a lesion of the skin appearing in the latter half of pregnancy, bearing the histologic characters of fibroma molluscum, but differing from it clinically in its total disappearance postpartum at a time when the other regenerative processes are being completed. Its distribution is limited to the neck, the breasts and the submammary area. The lesions are frequently pigmented, but this is not always the case and is not an essential element of the condition. The pigment runs from a light yellowish brown to a dark brown. The disease forms a clinical entity, hitherto undescribed, whose essential elements are the appearance of fibrous mollusca during pregnancy and their disappearance postpartum. Pathologically the group belongs to the group of fibrous molluscum.

72.—See abstract in THE JOURNAL, Oct. 14, 1905, page 1193.

73. **Id.**—Sept. 30, 1905, page 1022.

Virginia Medical Semi-Monthly, Richmond.

February 9.

79 Operation for the Radical Cure of Inguinal Hernia Under Cocain Anesthesia. S. McGuire, Richmond.
80 Operative Treatment for Tumors of the Neck. J. S. Horsley, Richmond.
81 Appeal for Nature's Balance Wheel—Moderation. E. T. Brady, Abingdon, Va.
82 Carcinoma of the Uterus. G. B. Johnston, Richmond.
83 *How Physicians Encourage the Use of Patent Medicines. J. T. Graham, Wytheville, Va.
84 Galvanic Treatment of Habitual (Chronic) Constipation. M. W. Peyser, Richmond.
85 Principles of Surgery. S. McGuire, Richmond.

February 23.

86 Acute Primary Meningitis. J. B. DeShazo, Ridgway, Va.
87 Have We Progressed? D. L. Field, Jeffersonville, Ind.
88 Skin Cancer. N. T. DaLaney, Bristol, Tenn.
89 Headaches. O. Wilkinson, Washington, D. C.
90 Our Business Opportunities. R. O. Huffaker, Chuckey, Tenn.
91 Case of Gastro-Duodenostomy. J. S. Horsley, Richmond.
92 Cause of Pneumonia. H. G. Graham, Gresham, Neb.

83. **How Physicians Encourage the Use of Patent Medicines.**—A too great indifference to patients' complaints is mentioned by Graham as one of the many ways in which physicians encourage the use of patent medicines. Even though the symptoms are purely imaginary, the physician should give them careful attention so that the patient will not be gobbled up by the luring advertisements of some patent medicine which gives him relief from his imaginary condition. There is another habit that many physicians have formed, and that is using too many stock formulas. Their use begets the habit of prescribing by routine, and although many of these compounds are good, they will not suit every case for which they are recommended. Then there is the habit of prescribing proprietary medicines. These relieve the patient but do not cure him. By studying each individual case carefully and treating it as indicated, Graham says that these evils can be overcome.

Journal of the Minnesota State Medical Association and the Northwestern Journal, Minneapolis.

February 1.

93 Venesection, Then and Now. C. F. Warden, Mankato.
94 Systematic Effects of Cardiac Insufficiency. J. S. Holbrook, Mankato.
95 Anemias and a Satisfactory Septum Operation. R. A. Campbell, Minneapolis.
96 *Case of Renal Decapsulation for Chronic Bright's Disease. L. F. Schmauss, Mankato.
97 Skin-Grafting in Burns of the Hands. A. E. Wilcox, Minneapolis.

February 15.

98 Renal Insufficiency from Autotoxic Strain as Related to Nephritis, and Its Treatment. G. F. Butler, Chicago.
99 The State Board of Medical Examiners—A Criticism. A. Sweeney, St. Paul.
100 Considerations on Eye-strain and the Neurologists. E. J. Brown, Minneapolis.

96.—See abstract in THE JOURNAL, Sept. 9, 1905, page 812.

Oklahoma Medical News-Journal, Oklahoma City.

February.

101 Far from the Maddening Crowd. W. B. Pigg, South McAlester, I. T.
102 Multiple Neuritis. M. A. Bliss, St. Louis.
103 Medicine as a Business. A. D. Updegraff, Anthony, Kansas.
104 Latent Rheumatic Conditions. J. R. Phelan, Oklahoma City.
105 Physiologic Therapeutics. E. C. Edwards, La Junta, Colo.
106 Limitations of Medicine. R. V. Pierce, Howard, Kans.

Journal of the Missouri State Medical Association, St. Louis.

February.

107 Recurrent Zoster and Neuralgic Repeating Herpes. J. Grindon, St. Louis.
108 Congenital Dislocation of the Hip. N. Allison, St. Louis.
109 Benign Tumors of the Breast. R. Hill, St. Louis.
110 Rectal Palpation. E. A. Babler, St. Louis.
111 Medical Observations in the Far East. M. McLean, St. Louis.

American Practitioner and News, Louisville, Ky.

February.

112 Injuries of the Urinary Bladder. I. Abell, Louisville.
113 Vernal or Spring Conjunctivitis. W. Cheatham, Louisville.
114 Paraffin Injections. W. B. Pusey, Louisville.
115 Prophylaxis of Scarlet Fever. E. S. King, Bluff City, Tenn.
116 Injuries of the Head. S. Anderson, Louisville.

Canadian Practitioner and Review, Toronto, Canada.

February.

117 Cataract and Optic Nerve Atrophy. J. P. Morton, Hamilton.
118 Medical Thoughts, Facts and Fancies. J. S. Sprague, Stirling, Ont.

Journal of Nervous and Mental Disease, New York.

February.

119 Progressive Muscular Atrophy; A Study of the Causes and Classifications. C. L. Dana, New York.
120 Hysterical Stigmata Caused by Organic Brain Lesions. H. H. Hoppe, Cincinnati.
121 Case of Crural Monoplegia Probably Representing the Early Stage of a Unilateral Ascending Paralysis Due to Degeneration of the Pyramidal Tracts. C. K. Mills, Philadelphia.
122 Separate Sensory Centers in the Parietal Lobe for the Limbs. W. G. Spiller, Philadelphia.

New York State Journal of Medicine.

February.

123 Present Status of Vaginal Cesarean Section. M. Stamm, Fremont, Ohio.
124 Acid Intoxication of Pregnancy. H. McM. Painter, New York.
125 Experiences with Apomorphia. G. H. Peddle, Perry, N. Y.

Kansas City Medical Index-Lancet.

February.

126 Thoughts on Infection; Particularly Its Secondary Action on the Heart. C. B. Hardin, Kansas City.
127 Lectures on Nervous and Mental Diseases. J. Punton, Kansas City.
128 Hemorrhoids and Their Treatment by the Ethical Practitioner. A. W. McArthur, Kansas City.

Vermont Medical Monthly, Burlington.

February 15.

129 Diseases of the Nutrition, Diabetes, Gout, Obesity and Gallstones. A. Lorand, Carlsbad, Austria.
130 Legal Requirements of the Medical Profession. C. J. Russell, Burlington.
131 Reciprocal Relations of Vermont. W. Scott Nay, Underhill.
132 Wood Alcohol Poisoning. H. A. Bogue, Richford, Vt.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

February 17.

1 Relation of the Medical Profession to War. A. H. Keogh.
2 Tuberculous Disease of the Lungs and Larynx. B. Bramwell.
3 *Acute Abdominal Disorders. G. Heaton.
4 Stagnation of Food in the Stomach. A. McPhedran.
5 *Review of a Series of Operations for Cancer of the Stomach. B. G. A. Moynihan.
6 *Treatment of Perforating Typhoid Ulcers. F. L. A. Greaves.
7 *Treatment of Diphtheria. T. B. Rhodes.

3. **Acute Abdominal Disorders.**—Heaton discusses the differential diagnosis between acute intestinal obstruction and other conditions which closely simulate this affection in their symptomatology and which often are mistaken for obstruction. The affections discussed in this connection are biliary or renal colic, perforation of gastric or duodenal ulcer, rupture of an appendiceal abscess, tuberculous peritonitis, acute hemorrhagic pancreatitis, and embolism or thrombosis of the superior mesenteric vessels. No new points are brought out.

5. **Cancer of the Stomach.**—Moynihan has operated on 59 patients suffering from cancer of the stomach. Gastroenterostomy was performed 35 times, with 5 fatalities. The anterior operation (with Murphy's button) was done 7 times, with 2 fatalities. The posterior operation (with suture) was done 28 times, with 3 fatalities. Gastrectomy was done 10 times, with 3 fatalities. The complete operation was done once, with one fatality; the partial operation was done 7 times, with one fatality, and the partial operation, with resection of the transverse colon, was done twice, with one fatality. Gastrostomy, for carcinoma at the cardiac end of the stomach, was done 5 times, with no fatality. Jejunostomy was done 3 times, with no fatality. Exploratory laparotomy (operation not necessary or not possible) was done 6 times, with fatality. Of the 30 patients who survived gastroenterostomy, 20 were traced to the time of their death; 6 are alive and well, and of 4 nothing is known. The earliest death among these occurred in the fourteenth week after operation, the latest two years and four months after operation. Of the gastrectomy cases, one patient has lived four and a half years and is quite well and free from recurrence. Four others have survived the operation between two and a half years and five months. The gastrostomy patients lived from five to seventeen months after operation. The jejunostomy patients lived from four and a half to eleven weeks after operation. In all these cases the stomach was so extensively involved that gastroenterostomy was impossible.

6. **Treatment of Perforating Typhoid Ulcers.**—Greaves reports 3 cases of this condition in which the patients were operated on. Two of the patients recovered completely.

7. **Treatment of Diphtheria.**—Rhodes believes that the very slightest excuse should be sufficient for the diagnosis of diphtheria in a child. Even so slight a sign as dryness or a parched appearance of the external nares in a child who seems poorly nourished is sufficient to indicate, in most cases, that diphtheria toxin is being manufactured, probably in the nasopharynx. He holds that diphtheria antitoxin never does any harm to a child and that it will assist in curing illness due to some disturbance in the throat or nasopharynx, even if that illness is not actually due to diphtheria. The time lost by delay in giving antitoxin in diphtheria is often sufficient to render the chance of recovery very small. Rhodes states that, though many experienced workers in the field of infectious diseases insist that very large doses are much more efficacious than small ones, sufficient stress is not laid on the fact that small doses, even though given late in the disease, will often just turn the scale in favor of the patient, or at least assist the patient to fight the disease and to hold it in check until the child can be taken to a hospital, where more antitoxin can be given. Finally, if every general practitioner would carry a syringe and one phial of antitoxin much more antitoxin would be given before the child is removed to hospital; the necessary delay in getting the antitoxin at present, and the difficulty, sometimes, in obtaining it, especially in country districts, being possible reasons why this treatment is not adopted immediately in all cases.

The Lancet, London.

February 17.

8 Appendicostomy and Its Possibilities. W. H. Bennett.
9 Physical Anthropology and Ethnology of British New Guinea. C. G. Seligmann.
10 The Acute Abdomen. W. H. Battle.
11 *Large Teratoma of the Neck Successfully Removed from an Infant Three Weeks Old. A. N. McGregor.
12 *Case of Persistent Aberrant Thymus. E. W. Sharp.
13 *Saccular Dilatation of the Small Intestine. E. Cautley.
14 Pneumothorax Due to Muscular Exertion in a Healthy Lad. W. G. Nash.
15 Cases of Stomatitis and Tonsillitis in which Vincent's Spirocheta and Bacillus Were Present. W. H. Harwood-Yarred, and P. N. Panton.
16 Case of Addison's Disease Rapidly Fatal, with Symptoms of Acute Toxemia. H. C. Lecky.
17 *Method of Removing Carcinoma of the Ascending Colon. F. D. Bird.
18 Malta Fever in India-Isolation of the Micrococcus Melitensis from the Milk of a Domestic Goat in the Punjab. W. H. C. Forster.

11. **Teratoma of Neck.**—The tumor in the case cited by McGregor was a multilocular cystic mass of about the size of a turkey's egg and of an irregularly conical shape. It contained both mesoblastic and epiblastic elements, so that it probably originated from an abnormal development of one or more of the branchial arches of the embryo. Some of the cysts were lined with a single layer of cuboidal or round cells, while others appeared to have several layers of cells. Some of the cysts had the characters of a dilated gland duct, and gave an

adenomatous appearance to the tumor section. The intercystic part of the tumor contained cartilage, spindle-celled connective tissue, non-striated muscle, arteries, veins and capillaries.

12. **Persistent Aberrant Thymus.**—Sharp's patient, a woman, aged 24, sought advice about a swelling in her neck, which had first been noticed when she was 11 years old, at which time constitutional treatment was tried to reduce it. It had gradually grown larger and had given rise to a marked swelling, situated at the base of the neck on the left side and extending from beneath the posterior border of the trapezius and also passing behind the clavicle. The growth, which was of about the size of an ordinary potato, had the structure of a lobulated gland with a capsule and intersections of fibrous tissue. On section it was found to consist of a mass of leucocytes, containing in their midst numbers of Hassall's concentric corpuscles of various sizes, some invaded by the leucocytes. The growth was divided by fibrous intersections, of which the larger contained fair-sized blood vessels.

13. **Saccular Dilatation of Small Intestine.**—Cautley describes a remarkable anomaly of development in a female infant who died at the age five weeks. She was admitted to the hospital with a history of vomiting since the third day of life. This had steadily persisted, and after the seventh day had been associated with diarrhea. The vomiting followed every meal. The abdomen was unduly prominent on the right side and a tumor of about the size of a pullet's egg could be felt to the right of and on a level with the umbilicus. The tumor was fairly movable, elastic, sometimes dull and at others resonant on percussion, and it would disappear entirely after moderate gentle manipulation. The liver dullness in front was completely absent. An inguinal hernia was present on the left side. The patient took food well, the vomiting ceased and the stools became almost normal. Later vomiting began again, but it stopped after two doses of cocain and a return to the diet of whey. Finally she became very feeble and cold and died from asthenia. There was no return of vomiting or diarrhea.

On opening the abdomen a cyst with opaque walls was seen immediately below the liver. The transverse colon was pushed downward and the liver upward, so that the edge of the latter was not visible, thus counting for the absence of liver dullness anteriorly during life. The cyst was considerably larger than the stomach, which was of normal size. The cyst measured three inches vertically, two inches transversely and one inch in the anteroposterior diameter. It was situated in the mesentery, arising from the gut at a distance of fifteen inches from the pylorus. It communicated with the gut by two adjacent openings close together; the larger one was slightly smaller than a dime and the smaller one was quite minute. The edges of the openings were smooth and irregular. In general appearance the cyst was similar to a saccular aneurism of the aorta with a small orifice. The duodenum and a small part of the jejunum above the origin of the cyst were much dilated and hypertrophied, while, below, the intestine was thin-walled and collapsed. Opposite the cyst the lumen of the canal seemed somewhat narrowed from pressure, but there was no true stricture. Both cyst and intestines contained normal bile-stained contents. Microscopically, the wall of the cyst was identical with that of the intestine from which it arose, the muscular tissue being considerably hypertrophied.

17. **Removal of Carcinoma of Colon.**—In a case of carcinoma of the ascending colon, about three inches beyond the cecum, Bird operated according to a method devised by him. The tumor is located and, its removal being decided on, the transverse colon is pulled down, two forceps are applied to it close together, a heavy one on the proximal side, and the gut is divided with large scissors in one cut. Swabs are used to avoid soiling the cavity, and the heavy forceps attached to the gut is allowed to hang out of the wound, a proceeding which puts the mesocolon on the stretch. The branches of the middle colic artery and the right colic artery are tied far back by a single ligature, which devascularizes a large portion of mesocolon, which can be severed by large scissors. Forceps are then placed on the ileum, about four inches from the junction of the large and small intestines, and the gut is divided; the distal end now depends from the wound, so that the whole portion to be resected is hanging by the ileocolic artery and some peritoneum. This blood vessel is ligated far back, the isthmus of tissue left is divided close to it, and the resected gut, two forceps and the ileocolic glands fall out of the wound altogether. There is no need to investigate the important ileocolic lymphatic area, for it has gone, but the mesocolic region should be examined for glands which may have escaped the section.

Thus four, or at most five, arteries have to be tied; the transverse colon is divided at right angles to its lumen, but the ileum, if it approaches the caliber of the colon closely enough to allow of apposition, is severed in a direction obliquely downward to the mesenteric attachment, which, of course, increases the size of the open end. If the disproportion be too great, the ileum is also separated at right angles, the patent lumen to be afterward applied, by means of temporary sutures, to an incision, proportionate in length, in the fundus of the colon about two inches from the gaping end, through which the stay ligatures are pulled, reversing Maunsell's method. The new ileocolic junction is quickly made by through-and-through sutures, to be reinforced after the ileum is pulled back by a continuous Lembert suture.

Glasgow Medical Journal.

February.

19 Double Lip (Hypertrophy of Labial Glands). G. H. Edington.
20 *Case of Exophthalmic Goiter in a Man Treated Successfully. W. F. Somerville.
21 Roentgen Rays in the Diagnosis of Urinary Calculus. J. R. Riddell.

20. **Treatment of Exophthalmic Goiter.**—The treatment adopted in the case reported by Somerville was isolation, with, at first, complete rest in bed. The windows of the large bedroom were wide open night and day. The patient, a man, was placed on a very liberal diet. In addition to three "square" meals, of which he partook largely, he had soup twice, a large afternoon tea and eighty ounces of milk per diem. He was twice daily treated by the high-frequency currents and every second day five mp. were applied by the continuous current for ten minutes, the positive pole being placed over the thyroid, the negative at the back of the neck. The patient had, further, heart massage each day, i. e., gentle stroking over the precordial region by a skilled masseuse. During the last two weeks he was permitted to go out, when the weather was fine, for a short walk on level ground. The medicinal treatment consisted in the use of the thyrodectin, which was replaced later by strophanthus, 2 minims every four hours, and thymus gland, 5 grains thrice daily. Later, dram doses, three times a day, of syrup of hydriodic acid were commenced and continued to the end. Smoking was at first prohibited, but later one cigar a day was allowed; no alcohol was administered, but the patient had *café au lait* twice a day and tea once. All the symptoms show signs of improvement, with the exception of the rate of the pulse, which remains from 87 to 95 a minute. Somerville attributes this return of tachycardia to the want of the high-frequency currents, which have an inhibitory influence on the heart's action.

Dublin Journal of Medical Science.

February.

22 Diagnosis and Treatment of a Perforated Gastric Ulcer. A. R. Parsons.
23 *Treatment of Gastric Vomiting with Oxalate of Cerium. C. A. Sweetnam.

23. **Cerium Oxalate in Vomiting.** — Within the last few months Sweetnam has been using cerium oxalate largely in cases of vomiting due directly to gastric disease, usually giving six-grain doses three times a day in adult patients, combined with ten-grain doses of carbonate of bismuth. In almost every case the result has been most satisfactory, and in several instances, when bismuth alone has failed to cause any marked improvement, a rapid change for the better has appeared when cerium oxalate has been added to the medicine. In gastric ulcer the pain is relieved and the vomiting ceases almost immediately; the same result occurs in chronic catarrhal gastritis, especially the form which is so common among badly nourished young women, whose work deprives them of their proper quantity of fresh air. In cancer of the stomach, although a permanent cure can not be expected, the symptoms are relieved and the patient's life is prolonged and made far more comfortable than by any other means; the pain is lessened, hematemesis ceases and the patients who have been unable to retain the smallest quantity of food taken by the mouth are soon able to retain several pints

of milk per diem and also small quantities of the prepared farinaceous foods. This, of course, does not hold good in cases in which the pyloric region is largely involved and in which the symptoms are mainly due to a mechanical obstruction of that opening.

Presse Médicale, Paris.

24 (XIV, No. 5.) *Le traitement chirurgical de l'anévrisme sous-claviculaire. Savariaud.
25 *La migraine des arthritiques. P. Hartenberg.
26 *Traitement des ulcères variqueuses par l'incision circonferentielle de la jambe. Hardouin.

24. **Surgical Treatment of Aneurism of Subclavian Artery.**—Savariaud calls attention to the advantages of making more than one incision, thus obtaining better oversight of the field; also to the fine results from the use of the ligature in the case reported, notwithstanding the dilated and weakened condition of the artery; also to the advantage of hollowing out a tunnel underneath the clavicle instead of resecting it, thus refraining from impairment of function later. Another point which he emphasizes is that the presence of coagula does not necessarily imply healing or even a tendency in that direction, as he has frequently had occasion to observe in the clinic and in the cadaver. The part of the subclavian involved close to the axillary is comparatively free from collaterals, and the branches of the axillary anastomose so frequently that there is no danger of gangrene. Out of 4 cases in which the second part of the subclavian and 9 in which the third part was ligated, only 1 patient died of pulmonary embolism. Ligature of the first part of the artery is much more serious. Resection of the aneurism is more dangerous than mere ligation; 1 patient died out of the 7 on record treated by extirpation. These conclusions apply only to aneurism outside of the scalenus muscle. When the origin of the artery is involved the indications and prognosis are quite different.

25. **"Rheumatic Migraine."**—Hartenberg refers to the headache which occurs as one manifestation of the peculiar diathesis or disposition which predisposes to joint disease. He calls it the "migraine of the arthritic," and is convinced that the pain is the result of compression of the nerve terminals by congested blood vessels. Everything that increases the pressure or the spasm—stooping over, any shock, compression or electric stimulation—increases the pain. The nausea and the photophobia are explained by the disturbances in the circulation through the meninges. All these angiospastic phenomena can be reproduced by irritation of the cervical sympathetic. The pathologic irritation is the result, he thinks, of a rheumatoid infiltration of the muscles, a "rheumatic myositis." When the case is recent the muscles are still elastic and supple, but in cases of long standing hard lumps can be palpated in the muscles. The myositis proceeds by waves, under the influence of fatigue, traction on the muscles, dampness, etc. The ganglia may be indurated and the skin infiltrated and thickened. The superior cervical ganglion is always hypertrophied and tender, and sometimes the inferior and the middle ganglia. This is the true cause of the migraine, which may be regarded as a reflex neurosis, similar to certain forms of reflex epilepsy. He has been very successful with treatment based on these assumptions; sodium salicylate is applied directly to the affected tissues. He accomplishes this by polar electrolysis, placing a negative electrode, impregnated with a 20 per cent. solution of sodium salicylate, on the neck, with the positive electrode on the abdomen or on the back in the lumbar region. The current he prefers is from 15 to 50 milliamperes, and each sitting is half an hour in length. Under the influence of the galvanic stimulation and of the specific drug the cervical rheumatism rapidly subsides. The attacks of migraine become milder and recur at longer and longer intervals until they finally cease altogether. On account of the tendency to recurrence it is advisable to resume the electric treatment with a few sittings from time to time. Hartenberg has treated a number of patients on these principles in the last two years, the results corroborating his conception of the causal mechanism and suggesting that possibly something of the kind may be a factor in other neuroses, especially in certain forms of epilepsy.

26. **Circular Incision of the Leg for Varices.**—Hardouin's technic is practically the same as when commencing amputation of the leg, the incision running around the limb. He has found the results extremely satisfactory, rapidly curing the severest cases of varicose ulcers and doing away altogether with the possibility of recurrence. One of the most remarkable benefits of the operation is the way in which the leg shrinks to normal size almost at once afterward.

Semaine Médicale, Paris.

27 (XXVI, No. 6.) Le corpus luteum. R. de Bovis.
28 (No. 7.) *La splénocléisis contre l'anémie splénique et la maladie de Banti. B. Schiassi (Bologna).
29 Mortalité par tuberculose en France et en Allemagne. (Germany).

28. **Rational Operative Treatment of Splenic Anemia.**—Schiassi reviews the history of splenic anemia and Banti's disease and their operative treatment. In certain individuals, he says, the spleen seems to be less resistant than normally and infectious germs are liable to locate in that organ and to cause structural changes which may induce functional disturbances. Removal of the spleen is a logical method of treatment, but is not proving so satisfactory in practice as was expected. Schiassi believes that the trouble in splenic anemia, with or without cirrhosis of the liver, is some metabolic, biochemical phenomena which affect the blood injuriously in the interior of the spleen and nowhere else. Treatment should aim to reduce the quantity of blood circulating sluggishly in the enlarged interspaces and to hasten the circulation through the spleen. To obtain this double result he tries to induce the formation around the spleen of a large capsule of connective tissue. This he accomplishes by introducing broad overlapping strips of gauze to form an envelope of a single layer of gauze entirely around the organ after most of its surface has been scraped with the sharp curette. The incision is sutured in tiers, with the ends of the strips of gauze emerging. On the fifth or sixth day the upper strip of gauze is pulled out and the other strips on the succeeding days, one each day until all are removed by the ninth or tenth day, and the rest of the incision can be sutured. The result of this irritation of the surface is the formation of a large amount of connective tissue, which clings to the spleen, reducing its size and congestion, while a network of new veins forms and diverts part of the circulation from the interior of the spleen. He has performed this operation on two patients with splenic anemia. In the first patient the hemoglobin had been reduced to 24 per cent. and the white corpuscles to 1,800 to the cubic millimeter, while the spleen measured 18x32 cm. Four months after the operation the hemoglobin had increased to 92 per cent. The hemoglobin in the second patient had been reduced to 40 per cent. and there were only 4,000 white corpuscles to the cubic millimeter, while the spleen measured 30x20 cm. In the course of three months after the operation the hemoglobin reached 84 per cent. The spleen in each case had become reduced to one-fifth its former size. The great improvement thus gained has persisted unmodified for a year. He regards fresh bone marrow and rest in bed, with abundant feeding, as important adjuvants for operative treatment. He has had no experience with this operation in Banti's disease, but thinks that omentopexy supplemented by this procedure is theoretically indicated, the former suppressing the ascites and the latter putting an end to the morbid intrasplenic metabolic phenomena. He operated four years ago on a woman with pronounced splenomegalia and cirrhosis of the liver with ascites, a typical case of Banti's disease, his intervention consisting in omentopexy and splenopexy. The patient is still in comparative health, the great improvement realized persisting to date.

Berliner klinische Wochenschrift.

30 (XLIII, No. 3.) *Zur Kasuistik des doppelseitigen Empyems. S. Laache.
31 *Anti-Hemolysis Biologic Blood Test.—Die forensische Blutdifferenzierung durch antihämolytische Wirkung. M. Neisser and H. Sachs.
32 Die Phagocytose-Behinderung des Subtilis durch das Subtilis-Aggressin. E. Weil and H. Nakayama.
33 *Inhibitory and Anesthetic Properties of Magnesium Salts. Die hemmenden und anästhesierenden Eigenschaften der Magnesiumsalze. S. J. Meltzer.
34 Conduction of Sensibility in Spinal Cord.—Leitung der Sensibilität im Rückenmark. M. Rothmann. (Concluded.)
35 Zur Behandlung der Neuralgien durch Alkoholeinspritzungen (alcohol injections). Schloesser.
36 Determination of Bacteria in Blood and Its Importance. Nachweis von Bakterien im Blut und seine Bedeutung. H. Beitzke.

37 *Behandlung der Hemeralopie mit Leber-Substanz (liver). H. Fabry.
38 Ein neues Tonsillen-Instrument. I. C. Henkes (Amsterdam).
39 (No. 4.) Behandlung der Lungen-tuberkulose mit Marmorek's Serum. E. Stadelmann and A. Benfey.
40 Behandlung der Tuberkulose mit dem Antituberkuloseserum Marmorek. E. Levin.
41 Zur Lehre von den Antikomplementen. C. Moreschi.
42 Rise in Temperature After Use of Thiosinamin.—Temperatur-Steigerung nach Thiosinamin-Gebrauch. E. Brinitzer.
43 Die Prognose der otogenen Meningitis. B. Heine.

30. **Bilateral Empyema.**—Laache has had 2 cases of bilateral empyema in his charge. One patient was a young man convalescing from pneumonia. Severe hemorrhage from the lungs followed an exploratory puncture of the second lung after the other lung had been punctured and was healing. The pus was removed by resection of a rib in the back. The patient succumbed in the second case, in which the empyema was of actinomycotic origin.

31. **Antihemolytic Test for Blood.**—This new test for forensic differentiation of blood spots was described recently in these columns on page 310. Further experience, Neisser states, has confirmed its delicacy and reliability.

33. **Inhibiting and Anesthetic Action of Magnesium Salts.**—The latest report on Meltzer's work with the magnesium salts was published in THE JOURNAL, March 3, 1906, page 647.

37. **Liver in Treatment of Hemeralopia.**—A few cases have been published here and there of remarkable benefit or cure of hemeralopia by feeding the patients with liver substance. Fabry reports another case in which the same remarkable result was obtained when the patient was given from 200 to 250 gm. of raw sheep's liver on three successive days. The patient was the native guide on an expedition in Africa. During the day his eyesight was above the average, but as the sun set he was unable to see at all. The affection had lasted three months, but subsided after the liver had been taken for three days.

Centralblatt f. Chirurgie, Leipsic.

Last indexed, page 311.

44 (XXXII, No. 52.) *Meine Methode der Gastroenterostomie, nebst Statistik der nach ihr gemachten Operationen. F. de Beule (Ghent, Belgium).
45 *Simple Technic for Extraction of Foreign Bodies in Urethra.—Ein einfaches Verfahren der Entfernung in der Harnröhre eingeklemmter Fremdkörper. P. Schroeter.
46 (XXXIII, No. 1.) Tendinitis achillea arthritica als eine besondere Form der Achilles-Sehnen-Erkrankung. R. v. Baracz. Id. G. Drehmann.
47 Zur Roentgen-Therapie der Haut-Sarkome. Albers-Schönberg.
48 (No. 2.) Improved Technic of Resection of Shoulder.—Resektion des Schultergelenkes. A. Catterina.
49 Ring-Knoten (knots).—For Tying Deep Ligatures. A. Hofmann.
50 Zum Gallen-Stein-Ileus. F. Fink.
51 (No. 3.) *Zur Technik des Bier'schen Verfahrens bei der Stauungs-Hyperämie (congestive hyperemia). J. Mindes.
52 *Rhinochirurgische Mitteilungen. L. Grünwald.
53 (No. 4.) Ueber primäre Naht ohne Drainage bei Früh-Operation der acuten Appendicitis (primary suture). J. Borelius.
54 (No. 5.) Zur Behandlung des Duodenal-Stumpfes bei der Resektions-Methode Billroth II. Kausch.
55 *Laminektomie und Nerven-Wurzel-Durchschneidung bei Neuralgie. R. Oehler.
56 (No. 6.) *Application of Water Power in Surgery and Orthopedics.—Anwendung der strömenden Wasserkraft in der Chir. und Orthop. (Ein neues System orthopädischer und medikomechanischer Apparate.) Machol.

44. **De Beule's Button for Gastroenterostomy.**—De Beule remarks that a year's experience has confirmed the superiority of his button, which has now been used in 22 gastroenterostomies. It is a mechanical impossibility for the vicious circle to develop or for any bile or pancreatic juice to find its way back into the stomach. The passage through the button turns to form a right angle, the opening into the stomach being in the top of the button, while the opening in the duodenum is in the side. By this arrangement it is almost impossible for fluids to find their way around the button and to pass backward through it. Eight different surgeons have used the button to date, including Bier, Gersuny and De Beule himself, and the mortality has been only half that reported by the best surgeons from other methods. The new button has certain special features that commend it for cancer cases, he adds. It much shortens the gastroenterostomy and allows the patient to be fed from the first day.

45. **Technic for Removing Foreign Body or Concrement from Male Urethra.**—Schroeter has been successful with the following simple procedure: If any urine is able to escape past the foreign body, the outer orifice is closed with the fingers and the patient is instructed to urinate as much as he can, forcing the urine into the urethra until it is much distended with it. The orifice is then abruptly released and the escaping flood sweeps out the foreign body with it. If no urine is able to pass the foreign body, he applies a constricting band above it and then injects water into the urethra to distend it from below, compressing the orifice and allowing the fluid to escape suddenly when the urethra has been sufficiently distended.

51. **Technic of Congestive Hyperemia.**—Mindes gives an illustration of the elastic roller and band which he uses for inducing congestive hyperemia. The aim is to induce red hyperemia; if too weak, the constriction does no good; if too strong, it causes blue or cold hyperemia and is liable to do serious damage. Consequently the roller band, allowing more accurate technic, has been found a great improvement. The roller is wound up with a key to the proper notch, where it is held by a click, holding the broad elastic band firmly in place.

52. **Two Rhino-surgical Interventions.**—One operation described by Grünwald was for the exposure of the interior of the nose and of all the accessory cavities at once, the particulars of the two incisions required being shown in two illustrations. The second operation illustrated is the resection of the vomer as the final step in the radical operation on the frontal sinus.

55. **Laminectomy and Division of Nerves for Neuralgia.**—Oehler commends an operation which he performed, after removal of a cancer in the breast, to cure the intense pain resulting from compression of the brachial plexus by some metastatic nodules. He exposed the dura by resecting the right arches of the fourth, fifth, sixth and seventh cervical vertebræ and of the first dorsal. He then resected the posterior roots of the fifth, sixth, seventh and eighth cervical nerves and of the first thoracic nerve. The wound was sutured at once without drainage, and the relief from pain amply justified the interference. The arm became entirely paralyzed, but this was inevitable from the way in which the nerves of the arm were imbedded in the metastatic nodules.

56. **Application of Water Power to Surgery and Orthopedics.**—Machol describes a method of correcting deformities by constant pressure, in use at Garré's clinic, in which the motive power is a stream of running water. The force is equable, can be exactly controlled, acts automatically and has other advantages which he enumerates. An illustration shows the apparatus adapted for correction of scoliosis. The patient lies on a duck extension table, the extension being applied to head and pelvis. The frame of the table is made of two pipes connected with the water system. An arching frame fits on the pipe and carries the pump contrivance with the attachment for applying the correcting pressure. A little manometer on each pump shows the exact pressure of the water. The water pipes can have as many branches as desired to apply correction at various points. The power applied is very even and constant, and can be kept up for hours under precisely similar conditions, the pressure yielding to and following the part to be corrected. He gives an illustration of the apparatus adapted to apply the water power in mobilizing joints, etc.

Zentralblatt für Gynäkologie, Leipsic.

Last indexed page 470.

57 (XXX, No. 1.) *Cesarean Section.—Zur Lehre vom Kaiserschnitt. R. Olshausen.
58 *Ueber die Verhütung der Fieberfälle im Wochenbett (prevention of puerperal morbidity). P. Zweifel. Reply by Ahlfeld in No. 3.
59 *Die Vaporisation des Uterus. K. Baisch.
60 Studium des Geburtsmechanismus. H. Sellheim.
61 (No. 2.) *Ueber den Nachweis von Fleisch-Milchsäure in der Zerebrospinal-flüssigkeit Eklamptischer (meat lactic acid in cerebrospinal fluid). H. Füth and G. Lockemann.
62 *Eine seltene Indikation zum Kaiserschnitte (Cesarean section). Brunet.
63 Näheres zum Tonusverlust der Gebärmutter bei der Curettage (loss of elasticity in walls of uterus). C. van Tussenbroek.
64 Geburt bei Uterus duplex bicornis cum Vagina septa. F. Stahler.
65 (No. 3.) *Symphyseotomie oder Pubotomie? W. Stoeckel.
66 *Zur Hebotomiefrage. A. Döderlein.
67 *Zur Anatomie und Technik der Publotomie. J. Tandler.
68 *Ueber die Art der Beckenerweiterung bei der Pubotomie (enlargement of pelvis). W. Rosenfeld.
69 (No. 4.) *Ein Versuch die "Katheter-Cystitis" zu verhüten (prevention). R. Gersuny.
70 Puerperal Self-Infection.—Ein Wort zu meiner Rechtfertigung gegenüber Natvig. F. Ahlfeld.

71 Kann in jedem Falle die Retention einer Placenta succenturiata diagnostiziert werden? A. Labhardt.
72 *Congestive Hyperemia in Gynecology.—Das Bier'sche Stauungsverfahren in der Gynäkologie. Kroemer.
73 Suction Hyperemia in Treatment of Suppurating Superficial Wounds.—Die Klapp'sche Saugbehandlung bei eiternden Hautwunden. J. Eversmann.
74 (No. 5.) Proportion of Sexes in Children Born.—Geschlechts-verhältnisse der Neugeborenen mit bes. Berücksichtigung der macerierten Kinder. M. le Maire.
75 "Neues Instrument zur Ventrofixation des Uterus." F. Förster (New York). Reply to J. Rudolph.
76 Zur Behandlung der Ureter-Fisteln bei der Frau. Neoureterocystostomie. N Phaenomenoff.
77 *Behandlung von Osteomalakie. A. Thielhaber.
78 (No. 6.) Dangers of Ventrofixation.—Gefahren der Ventrofixation. A. Calmann.
79 Zur Atonie des non-graviden Uterus. R. Asch.
80 *Menstruation während des Stillens (during nursing). E. Essen-Möller.
81 Artery Forceps with Catch Opened by Pressure.—Arterienklemme nach Péan-Koeberle mit tangential angeordneter Sperrung, die durch einfachen Druck ohne Voneinanderheben der Griffe gelöst wird. K. Reinecke (Hameln).
82 Instrument zur Stillung atonische Blutungen nach der Geburt (to control post-partum hemorrhage). H. Meyer-Ruegg (Zurich).

57. **Cesarean Section.**—Olshausen or his assistants have performed Cesarean section in 138 cases. In 7 it was on account of eclampsia, in 6 for myoma, in 4 for carcinoma, in 5 on account of vaginofixation, in 3 for nephritis, in 2 for heart disease and in 2 for cicatricial stenosis in cervix or vagina. In two of the women Cesarean section was done twice, in 2 three times and in 3 four times, and these 12 patients with contracted pelves all recovered from their twenty operations. In 4 other cases the Cesarean section was followed by double ligature of each tube and excision of the part between the ligatures to prevent conception later. Olshausen's experience has been decidedly in favor of a very high incision in the abdominal wall, extending above the umbilicus and not approaching nearer than 8 cm. to the symphysis. The incision in the uterus must always avoid the placenta. Its site can usually be determined by the network of veins on the uterine wall. The anterior wall of the uterus usually protrudes more than the posterior wall when it carries the placenta. The course of the round ligaments is not a reliable guide. He never has hemorrhage when he injects ergot twenty minutes before the operation. His dose is 2 gm. of a 6 per cent. aqueous solution of ergotin, with 1 or 2 more gm. later, if necessary. The child is not injured by the ergot. The uterus should be straightened and the incision made in the median line. Compression of the cervix is superfluous and even injurious, as hemorrhage is liable to follow its suspension. He sutures with soft catgut, sterilized in alcohol-carbolic solution, and makes from eight to twelve sutures, taking up as much muscle substance as possible in each stitch, avoiding the peritoneum and decidua, and concluding with a running suture of the peritoneum, including a little of the muscle wall. In the 91 operations done for contracted pelvis he operated personally in 65 cases with 3 deaths, and his assistants in 26 cases with 6 deaths.

58. **Prevention of Puerperal Morbidity.**—Zweifel reiterates his former assertion in regard to the advisability of wiping out the clots of blood which accumulate in the rear of the vagina after childbirth. He is convinced that they form a nest for germs, and now makes a point of removing them on his first visit to the parturient, a few hours after delivery. The clots are wiped out with a dry cloth through a speculum or removed with forceps if the woman is unable to force them out herself. The morbidity in the last series of 243 births was 5.7 per cent. During the last half of 1904, when rubber gloves were used and the vagina was thus wiped out dry, the morbidity in 629 cases was only 7.7 per cent. Over 92 per cent. of the patients recovered without temperature, including several with gonorrhea or lues.

59. **Vaporization of Uterus.**—Baisch shows in colored plates the histologic findings after application of steam to the interior of the uterus. The effect depends on the thickness of the mucosa; the thinner it is the more effectual the cauterization by the steam. The experiences at Döderlein's clinic indicate the advantage of preceding the vaporization with curettement with an interval of about six days. Any infection, septic or gonorrheal, either of the uterus or adnexa, must be regarded as a contraindication for vaporization. The only cases for which it is adapted are those of pure, uncomplicated, preclimacteric hemorrhages. For such cases vaporization is a much more conservative procedure than total extirpation, and the results by the above technic proved invariably satisfactory in Baisch's experience. He has thus treated 15 women.

61. **Lactic Acid in Fluids of Eclamptics.**—Zweifel's assertions in regard to the importance of lactic acid as an etiologic factor in eclampsia were mentioned recently in these columns on page 545. His statements are confirmed by the finding of the same salt of lactic acid in the cerebrospinal fluid of 3 eclamptic women.

62. **Cesarean Section for Varices in Vagina.**—Brunet's patient was a young primipara who had had repeated hemorrhages from the vagina since the onset of labor. The moment the tampons were removed the bleeding recurred. Only 2 patients were saved under these conditions in the 18 cases on record, but mother and child recovered in this case after Cesarean section. The varices rapidly subsided afterward. It is possible that injections of ergot in time might have aided in controlling the hemorrhage.

65-68. **Hebotomy: Extramedian Symphyseotomy.**—Bumm has performed this operation 13 times and healing was by primary intention in all but one case. There were no after-disturbances in the gait, and the children were all born alive. Stoeckel thinks that this operation should be restricted to pelves with a conjugata vera of not less than 8 cm., although it might be possible, he adds, to saw the pubic bone on each side and thus to enlarge the pelvis sufficiently even in the severer cases. Döderlein has performed the operation in 16 cases, leaving all the mothers and children in good condition. He indorses Zweifel's advice to await spontaneous delivery after the bone has been sawed. Tandler discusses the anatomy and technic of the operation, analyzing 19 of the latest cases that have been published by others. Rosenfeld reports research on the cadaver which shows the necessity for varying the technic to suit the particular kind of pelvic deformity.

69. **Improved Catheter to Prevent Cystitis.** — Gersuny ascribes to mechanical injury of the bladder wall a certain proportion of the cases of cystitis that develop after repeated catheterization. In order to prevent this he uses a short curved glass catheter with a projecting shoulder, which prevents its entering beyond a safe distance. In 35 cases in which this catheter was used after operation, cystitis developed in only one instance, although slight urethritis was observed in 4 cases. The patient with cystitis had required catheterization thirteen times and the others four or five.

72. **Congestive Hyperemia in Gynecology.**—Kroemer uses for the suction speculum a wide glass tube with a rubber tube connecting it with the suction pump and a graduated reservoir. His experience suggests that this method of treatment may prove admirable for acute inflammatory processes in the genitalia and for localizing an infectious focus. He thinks it should be of value also in treatment of the consequences of inflammatory processes, either by the active-passive hyperemia to soften strictures and scar tissue, promote absorption of infiltrates, etc., or for the relief of passive hyperemia, in which case it is best to combine it with scarifications. The latter combination might prove effectual, he says, in promoting involution of the puerperal uterus.

77. **Treatment of Osteomalacia.**—In Theilhaber's case the patient was clinically cured of osteomalacia by removal of the sound ovaries by way of the vagina. A year later monthly hemorrhages were noticed resembling menstruation and the symptoms of osteomalacia recurred. The bleeding was traced to a polyp in the uterus; after its removal the hemorrhages ceased and the symptoms of osteomalacia subsided also. He explains osteomalacia as an affection of the metabolism. Removal of the ovaries has a modifying effect on the metabolism. Other measures which modify metabolism are liable to prove useful also in osteomalacia, including venesection. In his case the pains vanished at once after the removal of the ovaries.

80. **Menstruation of Nursing Women.**—Essen-Möller states that menstruation reappeared in 60 per cent. of 427 women nursing their infants whom he examined. Menstruation appeared during the first two months after childbirth in about one-third. Mayer found a proportion of 57.8 per cent. in 685 women. The reappearance of the menses soon after childbirth, he states, may thus be regarded as a normal phenomenon.

Münchener med. Wochenschrift, Munich.

83 (LII, No. 52.) *Superheated Air in Gynecology.—Beiträge zur Heissluftttherapie bei Becken-Entzündungen. Ph. Jung.
84 *Die Tuberkulin-Therapie in der ambulanten Behandlung und bei Fiebernden (for out-patients and febrile cases). Krause
85 *Ueber Brachialgie. H. Brassert.
86 Acetone for Rapid Imbedding in Paraffin.—Ueber die Azetonanwendung zur Paraffineinbettung. A. Brunk.
87 Kompression der harnführenden Organe durch Adnextumoren (compression of ureters). M. Nassauer.
88 Extensions-Bahre (litter). A. Hofmann.
89 *Ueber die Hebotomie (extramedian symphyseotomy). A. Bauereisen. (Concluded.)
90 (LIII, No. 1.) *Operations in Sauerbruch's Air Chamber.—Bericht über die ersten in der pneumatischen Kammer der Breslauer Klinik ausgeführten Operationen. Sauerbruch.
91 *Beitrag zur Tuberculose-Frage auf Grund exp. Untersuchungen an anthropoiden Affen. v. Dungern.
92 *Fatigue Toxin.—Ermüdungstoxin und dessen Antitoxin. W. Weichardt.
93 Acquired Photoactivity of Tissues.—Erworbene Photoaktivität der Gewebe als Faktor der biologischen Strahlenwirkung und ihrer Imitation. R. Werner.
94 Relations Between Emotions and Heart Disturbances.—Ueber die Beziehungen von seelischen Empfindungen zu Herzstörungen. L. R. Müller.
95 Brucheinklemmung einer Appendix epiploica (isolated incarceration in inguinal hernia). von Bruns.
96 *Wesen und Wirkung von Schlangengiften mit kasuistischen Beiträgen (snake bites). Lotze.
97 *Ueber prophylaktische und therapeutische Anwendung des Antistreptokokken-Serums. F. Fromme.
98 Behandlung der fibrinösen Pneumonie mit Romers Pneumokokken-Serum. Winckelmann.
99 Sound Impermeable to Roentgen Rays.—Eine für Röntgenstrahlen undurchlässige biegsame Sonde. R. Freund.

83. **Superheated Air in Gynecology.**—Jung confirms his previous announcements in regard to the great efficacy and value of local application of superheated air as a means of promoting absorption of the products of acute and chronic affections of the adnexa and connective tissue in the pelvis. He has applied it in 137 cases. It avoids the injurious influence on the nervous system inevitable with some of the older methods requiring local manipulations. The pus or effusion is evacuated by an incision, with drainage, and then the superheated air is applied. After the patient is rubbed off she can go out of doors almost at once without danger of chilling. All acute processes contraindicate superheated air, including all febrile patients and those in whom pronounced hyperleucocytosis indicates impending or recent suppurative softening. High fever and other inconveniences are liable to be observed if superheated air is applied in these conditions. The special indications for it are exudation in the connective tissue or inflammatory tumefaction of the adnexa, chronic pelvic peritonitis with adhesions, or chronic indurations and cicatricial tissue in the pelvic connective tissue. It is astonishing sometimes how the old, hard masses soften and vanish under the influence of the hot air. Further indications are the cases with pus requiring incision. After evacution of the pus and decline of the acute symptoms the hot air will aid in the absorption of the remains of the morbid process. Still another favorable group includes those with exudation in the stump after an operation. Hysteric-neurasthenic disturbances are not benefited by the hot air, except, possibly, from the suggestion.

84. **Tuberculin Treatment for Febrile and Out-Patients.**—The warning is generally given that fever contraindicates tuberculin treatment. Krause has been giving a course of tuberculin treatment to febrile and other patients for whom sanatorium treatment was impossible. The results have justified his expectations, benefit being apparent in every instance. He used Koch's bacillus emulsion in a 1 per cent. dilution in salt solution, the dose of bacillus substance ranging from .005 to .03 mg. In the milder cases all the catarrhal manifestations were banished and they were always mitigated in the severer cases, while the fever vanished permanently in all. This effect on the fever in cases in which it had resisted all other measures was most striking, as also the benefit in the laryngeal tuberculous processes.

85. **Brachialgia.**—Brassert describes a case and declares that probably many cases of supposed traumatic reflex neuralgia are in reality cases of brachialgia. Treatment should be by suggestion and general, not local, measures. Local applications and advice to rest and to spare the arm merely perpetuate the brachialgia. Prompt recovery is the rule when treatment is by diversion and use of the arm.

89. **Hebotomy: Extramedian Symphyseotomy.**—Bauereisen concludes his extensive monograph on the subject, based on considerable personal experience, with a discussion as to whether or not delivery should be left to Nature after the pelvis has been enlarged by sawing the pubic bone. He thinks that natural delivery should be awaited after the bone has been sawed through.

90. **Operations in Sauerbruch's Air Chamber.**—Sauerbruch reviews the 15 important operations on heart, lungs or esophagus that have been done with the aid of his air chamber. It allows the lung to expand in an atmosphere with a pressure below that of the surrounding air. The chamber has been described fully in these columns. He relates that when the thorax was opened wide the respiration and pulse remained natural and normal, even in the case of one patient who was much debilitated from cancer of the esophagus and from addiction to alcohol. The results of the experiences since March, 1904, when the chamber was first used, have fully realized many of the hopes aroused by the results of experiments on animals.

91. **Inoculation of Monkeys with Tuberculosis.**—The experiments were made in Sumatra. A large number of gibbons had been collected by the Dutch authorities on the island for the experiments. Von Dungern remarks that it was astonishing to see the small amount of food (ripe fruit) required by the monkeys to keep them in good condition. No difference could be discovered in the effect of human and of bovine tubercle bacilli when inoculated into the monkeys. The facts observed corroborate the dangers for man of infection with bovine as well as with human tubercle bacilli.

92. **Fatigue Toxin and Antitoxin.**—This is Weichardt's fourth communication on this subject. He here announces that the albumin molecule has the tendency to split off certain toxic substances as it breaks up. These toxic substances, he states, are by-products in the formation of stable compounds. According to his conception, the fatigue toxin is thus neither a product of reduction nor of oxidation, but a by-product that originates as the albumin molecule begins to break up and one that induces the production of a specific antibody.

96. **Snake Bites.**—Recent research on this theme is reviewed in this article and the various methods of treating snake bite are enumerated. Lotze suggests that a cupping apparatus, connected with a suction pump, such as Bier uses to induce congestive hyperemia, might be found useful for sucking the venom out of the wound. Calmette's antivenene should be used when procurable, but if not, a 2 per cent. solution of chlorinated lime should be injected. This tends to neutralize the toxins by the gases generated. (See article in miscellany column, March 10, 1906, page 749.)

97. **Prophylactic and Therapeutic Use of Antistreptococcus Serum.**—Fromme has been making a practice lately of injecting 10 c.c. of antistreptococcus serum three or four hours before undertaking an important abdominal or vaginal operation. In 11 out of 13 cases of uterine cancer the after-course of the cases was exceptionally smooth, and likewise in 8 cases of other gynecologic affections similarly treated. The general impression was decidedly favorable in regard to prophylactic use of the serum. In several other cases it was administered for therapeutic purposes and the results were less strikingly beneficial. On the whole, the verdict is in favor of its prophylactic use and also for the treatment of incipient streptococcus infections. In case of postoperative peritonitis requiring secondary incision and drainage, the serum may be useful as an adjuvant, but little can be hoped from it in pyemia and septicemia and in infectious processes of long standing. Any powerful reaction will only do harm in this latter case.

Riforma Medica, Naples.

Last indexed, page 814.

100 (XXI, No. 33.) Auscultation of the Mouth.—L'ascoltazione orale nella diagnosi differenziale tra taluni rantoli consonanti il soffregamento pleuritico. T. Prodi.
101 *E possibile la diagnosi clinica fra trombosi acuta della porta e dei suoi rami e peritonite perforatoria? S. Solleri.
102 *Radioterapia e sifilide iniziale. C. Quadrone and A. Gramegna.
103 Leiomioma del muscolo bicipite brachiale. A. Cernezzi.
104 (No. 34.) *Blood Pressure in Heart Affections.—La pressione sanguigna nei malatti di cuore. C. Gennari.
105 Contributo alla cura del serramento cicatriziale delle mascelle (cicatricial lockjaw). R. Falcone.
106 Spirochæta pallida e infezione sifilitica. A. Risso and A. Cipollina.

101. **Differentiation of Thrombosis of Portal Vein from Peritonitis.**—Solieri's case of thrombosis of the portal vein complicating round ulcer of the stomach had been diagnosed as peritonitis from perforation of the gastric ulcer. He analyzes the similar cases on record, stating that only one was correctly diagnosed during life. Only a few of the patients could be cured by operative intervention. In differentiation the possibility of existence of changes in the liver liable to impede the normal circulation should be borne in mind. The symptoms are like those of perforation peritonitis. Bloody diarrhea is characteristic, but it may be substituted by ileus, as in the case described. The patient's face was pale and ashy, but not contracted as in case of peritonitis. He experienced intense pain, but the abdomen was not so extremely sensitive to pressure as in peritonitis from the inflammatory irritation of the nerve terminals in the parietal peritoneum. The abdominal wall was not rigid and there was no hiccough. There was much more effusion than is common in peritonitis, and it recurred rapidly after tapping. The alarming symptoms come on more slowly in case of thrombosis than in peritonitis from perforation.

102. **Radiotherapy of Primary Syphilitic Lesions.**—The writers' experience with *x*-ray treatment of the primary inguinal bubo shows that such lesions react to the exposures with inflammatory phenomena more intense than are observed in any other form of glandular trouble. A large number of experiences and years of observation are required to decide the question as to the further development of syphilis thus treated.

103. **Blood Pressure in Heart Affections.**—Gennari asserts that the blood pressure is always high in case of heart disease or arteriosclerosis whenever there is a complicating kidney affection, and that this may be important in differentiating puzzling cases in which the urine does not indicate renal trouble. He always noticed that patients with cardiac affections improved by treatment in the hospital, had a much lower blood pressure than when first admitted to the hospital. The blood pressure increases or diminishes parallel to disturbances in compensation, and may thus serve for the prognosis.

Nordiskt Mediciniskt Arkiv, Stockholm.

Last indexed, XLV, page 2034.

107 (XXXVIII, Surgery, No. 1.) *Treatment of Large Cavities in Long Bones.—Zur Behandlung grösserer schwer heilender Knochenhöhlen in den langen Röhrenknochen. G. Ekehorn.
108 *Einige Reflexionen über die operative Behandlung des Torticollis spasticus. J. Berg.
109 *Zur Kenntnis der Ectopia ovarii inguinalis. E. Bovin.
110 Fall von Papillom der Gallenblase (of gall bladder). A. Hansson.

107. **Treatment of Non-Healing Cavities in Long Bones.**—Ekehorn has been very successful with his technic of lining the cavity in the bone with Thiersch skin flaps. He applies this method in various kinds of acute and chronic affections of the bones leaving a cavity. The procedure is so simple that it can scarcely be called an operation, and if it fails no harm has been done. Healing has not been delayed a moment. If it succeeds—and he has found it especially successful in case of cavities of long standing—then the healing has been materially promoted. Another advantage is that if some small focus has been overlooked it is placed in a favorable condition for healing. One of his patients had suffered from osteomyelitis of the lower end of the femur for twenty-five years and had been operated on six times. Again and again the process would recur, and there was always a dull, heavy sensation in the limb and occasionally pain and fatigue. After five years' intermission the process broke out again in an acute form in 1902 and again a year later. It was carefully treated according to the usual measures, but again broke out in 1903. Ekehorn then performed Thiersch transplantation. The cavity was first scraped to sound tissue and tamponed. After two or three days the Thiersch flaps were applied directly from the knife. They were cut in strips long enough to reach from the center of the bottom of the cavity to the edge of the wound in the skin, passing over the bone walls and soft parts. When the cavity was thus lined it was tamponed, using a "tampon tube" for the purpose, and a dry dressing was applied outside. The tampon was left for four or five days until it could be removed without disturbing the flaps. They healed in place in a week or less. The patient was freed at once from all his disturbances and can now use his leg normally without fatigue. Another patient with an osteomyelitic fistula of long standing was cured in the same way by the Thiersch skin flaps. Another patient was a man of 68 who had had recurring osteomyelitis in the upper end of the tibia since childhood. After failure of other treatment this treatment completely cured the lesion and the tendency to recurrence. The results seem to be particularly fine in these old cavities. The strips of granulations between the flaps soon heal over completely and the part has a permanently healthy aspect.

108. **Operative Treatment of Spastic Torticollis.**—Berg presents evidence to show that the drawbacks of operative treatment are comparatively trifling in case of spastic wry-neck. Success can be expected only when the operation is extended to conform to the indications of each individual case. In by far the larger majority the muscles of the neck are involved as well as the sternocleidomastoid, and consequently severing the spinal accessory nerve alone does not meet the indications. In the 5 cases reported the cervical nerves and the accessory were divided at different sittings in 3, and the result of each of these partial operations was precisely what was to be expected from the anatomic conditions. This excludes the idea of suggestion as a factor in the final success. All these patients were cured, although a very slight tendency to deviation of the head is still observable in repose. In another case the accessory nerve was merely stretched and psychic treatment according to Brissaud instituted, with the result of a rapid cure to date. Before resorting to surgical measures Berg advises the most extensive application of the Brissaud system of psychic treatment. If operative treatment becomes necessary the prospects are better, the smaller the region involved and the less the psychopathic tendency. Unless the sternocleidomastoid is unmistakably and prominently involved in the spasm, it is useless to resect the accessory nerve. The operation on the posterior branches of the superior cervical nerves should be restricted to division of the second branch at the intervertebral foramen and cautious division of the two contracted muscles at their insertion on the transverse processes of the atlas.

109. **Ectopic Ovary.**—In the case described, a woman of 42 with otherwise normally developed genitalia, was operated on for a congenital inguinal hernia. The hernia was first noticed three years before, and it became tender at the time of the menses; otherwise there was nothing abnormal. The hernia suddenly began to increase in size and was operated on. It was found to be a cystic tumor of ovarian tissue, probably an ectopic ovary.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A TEXT-BOOK ON PRESCRIPTION-WRITING AND PHARMACY, with Practice in Prescription-writing, Laboratory Exercises in Pharmacy and a Reference List of the Official Drugs, Especially Designed for Medical Students. By B. Fantus, M.D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Chicago. Second Edition. Thoroughly Revised and Adapted to the Eighth (1905) Edition of the U. S. Pharmacopœia. Cloth. Pp. 404. Price, $3.00 net. Chicago: Chicago Medical Book Co., 1906.

I. New or Noteworthy Philippine Plants, IV. II. Notes on Cuming's Philippine Plants in the Herbarium of the Bureau of Government Laboratories, by E. D. Merrill. III. Notes on Philippine Gramineæ, by E. Hackel. IV. Scitamineæ Philippinenses, by H. N. Ridley. V. Philippine Acanthaceæ, by C. B. Clarke. Publication of Department of the Interior, Bureau of Government Laboratories, No. 35. December, 1905. Paper. Pp. 99. Manila: Bureau of Printing, 1905.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA. (The State Board of Health) (organized 1847). Meeting of 1905, at Montgomery, April 19-22. Cloth. Pp. 587. Montgomery, Ala.: Brown Printing Co., 1905.

THE REAL TRIUMPH OF JAPAN: The Conquest of the Silent Foe. By Louis Livingston Seaman, M.D., LL.D., late Surgeon-Major of U. S. V. E. Cloth. Pp. 291. Illustrated. Price, $1.50. New York: D. Appleton & Co., 1906.

OUTLINES OF MEDICAL DIAGNOSIS. Prepared for the Use of Students, at the Harvard Medical School, Boston, 1906. Fourth Edition. Cloth. Pp. 33. Boston: For sale by F. H. Thomas Co., 1906.

FOOD AND THE PRINCIPLES OF DIETETICS. By R. Hutchison, M.D., F.R.C.P. Revised Edition, with Plates and Diagrams. Cloth. Pp. 582. Price, $3.00 net. New York: William Wood & Co.

PERSONAL HYGIENE. Designed for Undergraduates by A. A. Woodhull, A. M., M.D., LL.D. First Edition. Cloth. Pp. 221. Price, $1.00 net. New York: John Wiley & Sons, 1906.